



Matt Villicana  
Project Manager

June 24, 2016

Mr. Jaime Brown  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region 5  
77 W. Jackson Boulevard  
Chicago, IL 60604

**Subject:** Letter Report – Ford Heights Tire Fire ER  
**1703 Cottage Grove Avenue, Ford Heights, Cook County Illinois 60411**  
**EPA Contract No. EP-S5-13-01**  
**TDD No. S05-0001-1605-016**  
**DTN No. 0799**

Dear Mr. Brown:

Under the Superfund Technical Assessment and Response Team (START) Contract No. EP-S5-13-01, the U.S. Environmental Protection Agency (EPA) Region 5 tasked Tetra Tech, Inc. (Tetra Tech), to conduct emergency response (ER) activities at a tire fire from May 24 to May 28, 2016. The tire fire occurred at the GMI Recycling property located at 1703 Cottage Grove Avenue, Ford Heights, Cook County, Illinois (Figure 1, Appendix A).

This letter report summarizes the activities conducted by Tetra Tech during the ER. Appendix A contains figures illustrating the site location, site layout, ambient air sample results, and surface water sample locations. Appendix B contains tables of laboratory analytical results. Appendix C contains air monitoring summaries from May 24 to May 28, 2016. Appendix D contains the photographic log of response activities. Appendix E provides the Tetra Tech START field logbook notes. Appendix F provides the Data Validation Reports for the three analytical data packages. Attachment 1 contains the EPA Initial Pollution Report (POLREP) for the emergency response. Attachment 2 contains a collection of three analytical reports for samples collected during the emergency response.

## BACKGROUND

During the morning of May 24, 2016, sparks from hot work being conducted at the adjoining property to the south (All American Recycling) ignited a tire pile at GMI Recycling, which then spread throughout a large tire pile located on the eastern side of the GMI Recycling property (Figure 2, Appendix A). Several fire departments initially responded and attempted to extinguish the fire. At approximately 15:00, START was dispatched to the site along with EPA On-Scene Coordinator (OSC) Jaime Brown. The fire was actively smoldering with occasional flare-ups leading to heavy black smoke being emitted when EPA and START arrived at the site.

## RESPONSE ACTIVITIES

Throughout the emergency response, START personnel conducted air monitoring, water quality monitoring, ambient air sampling, and surface water sampling. Each of these tasks is discussed below.



## Air Monitoring

Upon arrival at the site, START personnel immediately initiated air monitoring activities by deploying AreaRAEs upwind (FHTF-AMP-01) and downwind (FHTF-AMP-02) of the tire fire and near the Cottage Grove Middle School (FHTF-AMP-03). The school is located north of the site at 800 14<sup>th</sup> Street, Ford Heights, Cook County, Illinois (Figure 2 in Appendix A). During the response, START personnel also conducted periodic mobile air monitoring utilizing real-time multi-gas monitors (MultiRAEs) and a real-time benzene specific monitor (UltraRAE) with benzene separation (Sep) tubes. START personnel conducted mobile air monitoring by wearing respirators to allow them to walk into the smoke plume as close to the burning or smoldering tire piles as safely possible with a MultiRAE Pro. START personnel also conducted mobile air monitoring by carrying the MultiRAE Pro around while on-site to ensure worker safety.

AreaRAE data was collected and downloaded for processing and analysis from May 24 through 28, 2016. A summary of the data is provided in Appendix C. The equipment at FHTF-AMP-01 and FHTF-AMP-02 was deployed for 24-hour air monitoring, and the AreaRAE at FHTF-AMP-03 was only deployed during the day with the exception of May 27, 2016 to May 28, 2016 when the AreaRAE was left to monitor the air overnight. Once the data had been downloaded from the AreaRAEs, the equipment was then re-calibrated and redeployed to the same location.

The highest chemical readings were detected at the downwind location during the first evening of the response based on the analysis of the AreaRAE data. The highest observed chemical readings during the response were as follows: volatile organic compounds (VOCs) – 12.7 parts per million (ppm), lower explosive limit (LEL) – 0.0%, hydrogen chloride gas (HCL) – 1.6 ppm, and hydrogen cyanide gas (HCN) – 0.2 ppm. The data shows that the readings progressively dropped following the first evening of the response (see Appendix C).

An AreaRAE was also deployed at the southeastern fence of the Cottage Grove Middle School daily from May 25, 2016 to May 28, 2016 approximately between the hours of 8:30 AM to 4:30 PM. Between May 27, 2016 to May 28, 2016, the AreaRAE was left to monitor the air overnight. The data from the AreaRAE deployed at the Cottage Grove Middle School indicated the highest chemical readings were as follows: VOCs – 0.4 ppm, LEL – 0.0%, and HCN – 0.0 ppm.

On the second day of the response (May 25, 2016), START personnel received two TSI DustTrak DRX particulate monitors from the EPA Warehouse to provide particulate monitoring at FHTF-AMP-01 and FHTF-AMP-02. From May 25 through 28, 2016, the highest particulate readings were observed in the upwind monitor (FHTF-AMP-01), which could be due to the large amount of trucks and heavy equipment moving around the adjoining property (All American Recycling). The highest particulate readings observed during the response (0.622 mg/m<sup>3</sup> PM2.5 at FHTF-AMP-01 on May 25, 2016) did not exceed action levels as defined by half of the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits for nuisance dust (7.5 mg/m<sup>3</sup>).

## Water Quality Monitoring

Throughout the emergency response (May 24 to 27, 2016), START personnel conducted water quality monitoring at up to three locations. Monitoring was conducted once per day using a YSI multi-parameter water quality meter to determine if runoff water from fire suppression activities was affecting the water chemistry of the nearby Deer Creek (Figure 2 in Appendix A). The three locations where water quality readings were collected included an outfall located at the southeastern corner of the All American Recycling property (FHTF-WQMP-01), an upstream location of Deer Creek (FHTF-WQMP-02), and a

downstream location of Deer Creek (FHTF-WQMP-03). Water quality monitoring included temperature, dissolved oxygen, pH, oxygen reduction potential, total dissolved solids, and specific conductivity.

Results for the water quality monitoring are provided in the table below:

### **DAILY WATER QUALITY MONITORING RESULTS**

Parameter	FHTF-WQMP-01				FHTF-WQMP-02	FHTF-WQMP-03			
	5/24/16	5/25/16	5/26/16	5/27/16	5/24/16	5/24/16	5/25/16	5/26/16	5/27/16
Temperature (°C)	22.3	18.42	19.81	19.64	22.34	21.45	19.9	21.03	21.60
Dissolved Oxygen (mg/L)	7.00	7.42	7.60	7.14	10.98	10.95	11.97	9.6	13.26
pH (unitless)	7.07	7.14	7.15	7.08	8.31	8.25	7.94	7.81	7.84
Oxygen Reduction Potential (mV)	-23.6	59	54	64	-3.5	-9.8	79.9	101.1	110.8
Total Dissolved Solids (g/L)	0.760	0.496	0.723	0.646	1.174	1.117	1.209	1.211	1.107
Specific Conductivity (µS/cm)	1.70	0.764	1.113	1.124	1.806	1.718	1.86	1.864	1.704

**Notes:**

°C      Degrees Celsius  
 g/L     Grams per liter  
 µS/cm   Micro-Siemens per centimeter  
 mg/L    Milligrams per liter  
 mV     Millivolts

Results from the water quality monitoring indicated that the water quality parameters remained consistent throughout the response with the exception of Oxygen Reduction Potential (ORP) and temperature. At both locations that were monitored multiple times during the response, the ORP value increased from -23.6 to 64 at FHTF-WQMP-01 and from -9.8 to 110.8 at FHTF-WQMP-03.

### **Ambient Air Sampling**

START personnel collected two ambient air samples during the emergency response. Ambient air sample FHTF-AA-01-052516 was a 24-hour air sample that was collected from the downwind air monitoring location (see Figure 2 in Appendix A). Ambient air sample FHTF-AA-02-052516 was a grab sample collected from within the smoke plume at a safe distance from the active fire. Both samples were collected on May 25, 2016 and were analyzed for VOCs.

Analytical results from these two samples revealed that the smoke from the tire fire contained several organic compounds. Both samples had organic compounds that exceeded EPA Residential Air Regional Screening Levels (RSLs). Sample FHTF-AA-01-052516 had the following organic compounds that exceeded the EPA Residential Air RSLs: 1,2,4-Trimethylbenzene (28 µg/m<sup>3</sup>), 1,3-Butadiene (37 µg/m<sup>3</sup>), Benzene (350 µg/m<sup>3</sup>), Ethylbenzene (150 µg/m<sup>3</sup>), m,p-Xylenes (210 µg/m<sup>3</sup>), and Naphthalene (13 µg/m<sup>3</sup>).

Sample FHTF-AA-02-052516 had higher concentrations than sample FHTF-AA-01-052516 including the following organic compounds that exceeded the EPA Residential Air RSLs: 1,2,4-Trimethylbenzene (350 µg/m<sup>3</sup>), 1,3-Butadiene (210 µg/m<sup>3</sup>), Acetonitrile (360 µg/m<sup>3</sup>), Benzene (2,600 µg/m<sup>3</sup>), Ethylbenzene (1,400 µg/m<sup>3</sup>), m,p-Xylenes (2,000 µg/m<sup>3</sup>), Naphthalene (210 µg/m<sup>3</sup>), and o-Xylene (440 µg/m<sup>3</sup>). See Table A in Appendix B for a complete listing of the organic compounds detected in the two ambient air samples. The laboratory report for ambient air samples is provided in Attachment 2.



## Surface Water Sampling

START personnel collected two grab surface water samples during the emergency response. Surface water sample FHTF-SW-001-052416 was collected from ponds of fire suppression runoff that were gathering near the smoldering tire piles and analyzed by a laboratory for VOCs and semivolatile organic compounds (SVOCs). Surface water sample FHTF-SW-002-052616 was collected from a retention pond on the south side of the All American Recycling property and analyzed by a laboratory for VOCs, SVOCs, inorganics (metals), total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel-range organics (DRO), and extended-range organics (ERO).

Analytical results from the two samples revealed that the runoff water from the fire suppression efforts and the water in the retention pond contained several organic compounds that exceeded either EPA Maximum Contaminant Levels (MCLs) or Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action (TACO) Tier 1 Remediation Objectives (ROs). Because there are not any remediation objectives for surface water, the water samples were compared to IEPA TACO Tier 1 Groundwater ROs.

Sample FHTF-SW-001-052416 contained the following organic compounds that exceeded MCLs or ROs: Benzene (23 µg/L), Benz(a)anthracene (0.52 J µg/L), Benzo(a)pyrene (0.32 J µg/L), and Benzo(b)fluoranthene (0.49 J µg/L). Sample FHTF-SW-002-052616 contained the following organic compounds that exceeded MCLs or ROs: Benzene (0.26 mg/L), Benzoic Acid (33 mg/L), 2,4-Dimethylphenol (0.21 mg/L), 2-Methylphenol (0.99 mg/L), and Phenol (1.7 mg/L). Sample FHTF-SW-002-052616 was also analyzed for TPH, and contained 1.9 mg/L of GRO, 8.8 mg/L of DRO, and 0.15 mg/L of ERO. See Tables B and C in Appendix B for a complete listing of detected analytes in the surface water samples. The laboratory reports for surface water samples are provided in Attachment 2.

## FURTHER ACTION

EPA and START were relieved of oversight duties by IEPA and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) on May 28, 2016. IEPA assumed the lead for oversight of responsible party response activities as the site was currently under a Tire Removal Agreement with IEPA. Also, MWRD assumed the lead for ensuring the runoff water was collected and disposed of properly due to potential sewer and waterway impacts within its jurisdiction. As a result, no further action is required from EPA regarding the tire fire incident. One POLREP was filed by EPA during the course of the emergency response. The POLREP is provided in Attachment 1.

If you have any questions regarding this report or the response, please call me at 312-201-7430.

Sincerely,

A handwritten signature in black ink that appears to read "Matthew Villicana".

Matt Villicana  
Tetra Tech START V Site Manager

A handwritten signature in black ink that appears to read "John Dirgo".

John Dirgo  
Tetra Tech START V Quality Assurance Manager



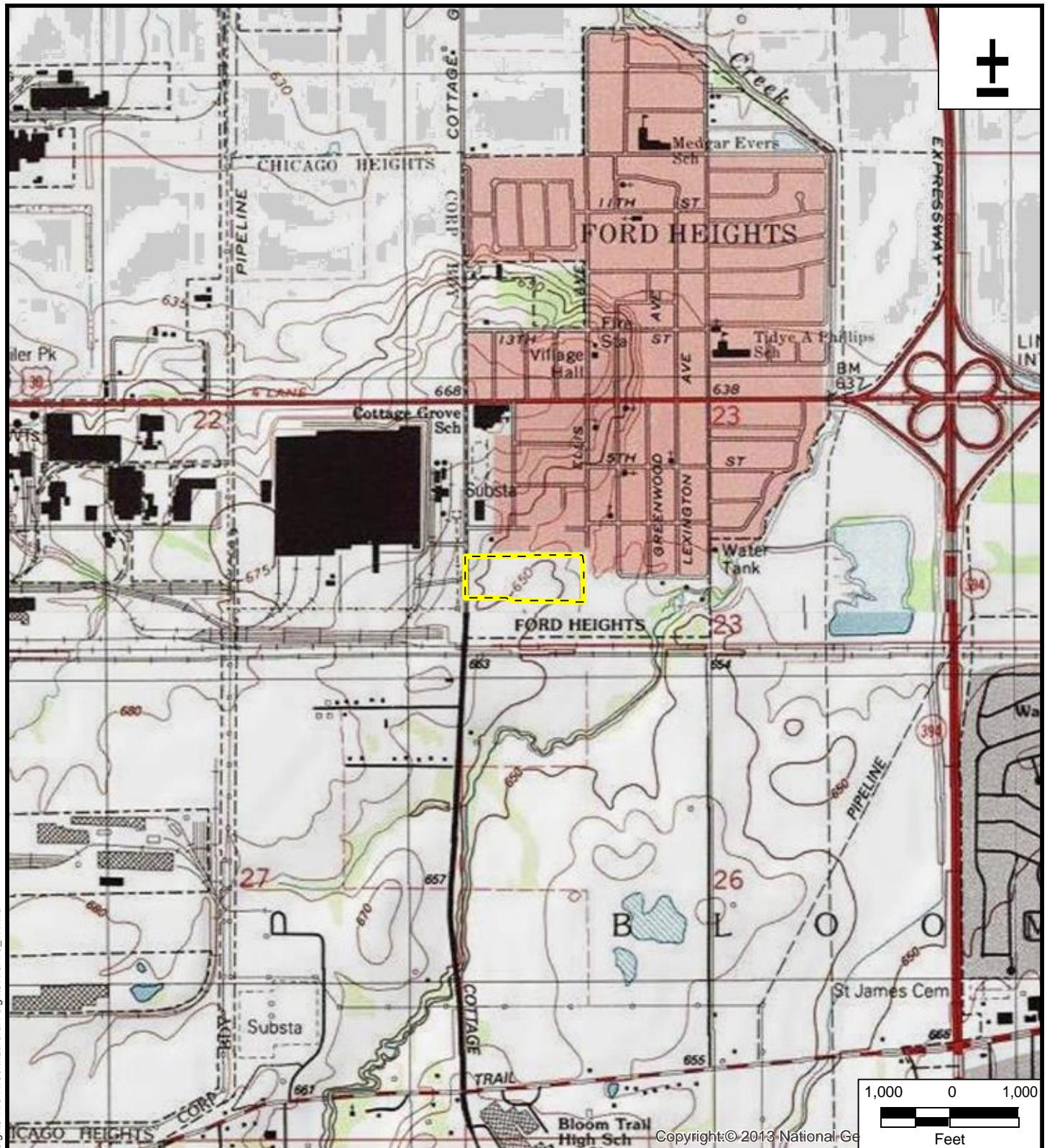
Appendices (5)  
Attachments (2)

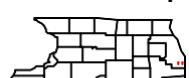
cc: Sam Chummar, EPA Project Officer  
Kathleen Knox, START IV Document Control Coordinator

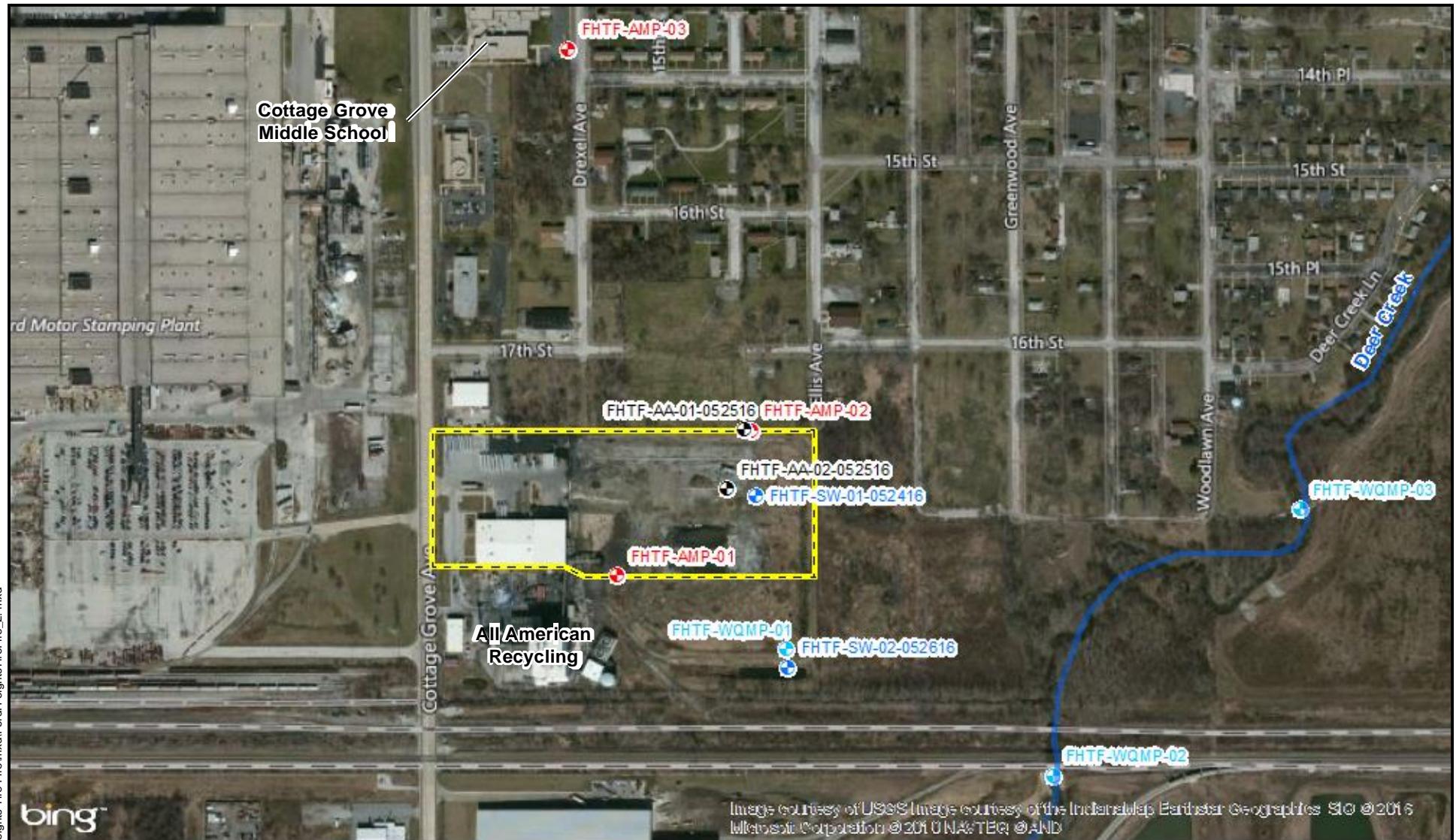
## **APPENDIX A**

### **FIGURES**

(2 Pages)



<b>Reference Map</b> 	<b>Legend</b>  Approximate Site Boundary	Ford Heights Tire Fire Ford Heights, Illinois
<b>Figure 1</b> <i><b>Site Location Map</b></i>		
 <b>TETRA TECH</b>		



**Legend**

- [Yellow dashed box] Approximate Site Boundary
- [Red dot] Air Monitoring Point
- [Blue dot] Air Sampling Point
- [Light blue dot] Surface Water Sampling Point
- [Light blue dot] Water Quality Monitoring Point

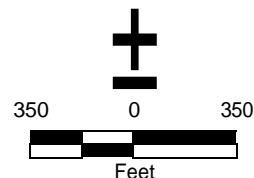
Source: Bing Maps Hybrid (2011 - 2012)

Date Saved: 6/22/2016

EPA Contract No.: EP-S5-13-01

TDD No.: S05-0001-1605-016

Image courtesy of USGS Image courtesy of the Indiana Map Earthstar Geographics Inc. ©2016  
Intermap Corporation ©2010 NGA/NGER ©2016



Ford Heights Tire Fire  
Ford Heights, Illinois

**Figure 2**  
**Site Layout Map**



**TETRA TECH**

Prepared For: USEPA

Prepared By: Tetra Tech, Inc.

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere Projection; Mercator Auxiliary Sphere Datum: WGS 1984 Units: Meter

## **APPENDIX B**

### **TABLES**

(3 Pages)

**Table A**  
**Data Summary Table**  
**Analytical Report 1602767**

		Laboratory ID :	P1602767-001	P1602767-002
		Client Sample ID :	FHTF-AA-01-052516	FHTF-AA-02-052516
		Date Collected :	05/25/16	05/25/16
		EPA Residential Air Screening Level		
CAS No.	Analyte	Units		
95-63-6	1,2,4-Trimethylbenzene	µg/m <sup>3</sup>	7.3	<b>28</b>
108-67-8	1,3,5-Trimethylbenzene	µg/m <sup>3</sup>	--	<b>11</b>
106-99-0	1,3-Butadiene	µg/m <sup>3</sup>	0.094	<b>37</b>
78-93-3	2-Butanone (MEK)	µg/m <sup>3</sup>	5,200	<b>31</b>
591-78-6	2-Hexanone	µg/m <sup>3</sup>	31	<b>2.9</b>
622-96-8	4-Ethyltoluene	µg/m <sup>3</sup>	--	<b>49</b>
108-10-1	4-Methyl-2-pentanone	µg/m <sup>3</sup>	3,100	<b>34</b>
67-64-1	Acetone	µg/m <sup>3</sup>	32,000	<b>140</b>
75-05-8	Acetonitrile	µg/m <sup>3</sup>	63	<b>10</b>
71-43-2	Benzene	µg/m <sup>3</sup>	0.36	<b>350</b>
98-82-8	Cumene	µg/m <sup>3</sup>	420	<b>25</b>
110-82-7	Cyclohexane	µg/m <sup>3</sup>	6,300	<b>5.7</b>
5989-27-5	d-Limonene	µg/m <sup>3</sup>	--	<b>300</b>
64-17-5	Ethanol	µg/m <sup>3</sup>	--	<b>89</b>
100-41-4	Ethylbenzene	µg/m <sup>3</sup>	1.1	<b>150</b>
179601-23-1	m,p-Xylenes	µg/m <sup>3</sup>	100	<b>210</b>
91-20-3	Naphthalene	µg/m <sup>3</sup>	0.083	<b>13</b>
142-82-5	n-Heptane	µg/m <sup>3</sup>	--	<b>19</b>
110-54-3	n-Hexane	µg/m <sup>3</sup>	730	<b>21</b>
111-84-2	n-Nonane	µg/m <sup>3</sup>	--	<b>8.3</b>
111-65-9	n-Octane	µg/m <sup>3</sup>	--	<b>13</b>
103-65-1	n-Propylbenzene	µg/m <sup>3</sup>	--	<b>22</b>
95-47-6	o-Xylene	µg/m <sup>3</sup>	100	<b>45</b>
115-07-1	Propene	µg/m <sup>3</sup>	3,100	<b>280</b>
100-42-5	Styrene	µg/m <sup>3</sup>	1,000	<b>68</b>
108-88-3	Toluene	µg/m <sup>3</sup>	5,200	<b>370</b>
75-69-4	Trichlorofluoromethane	µg/m <sup>3</sup>	--	<b>1.2</b>

Notes:

Contaminants that are shaded exceed the EPA screening level for residential air.

CAS                      Chemical Abstracts Service

µg/m<sup>3</sup>                      Micrograms per cubic meter

**Table B**  
**Data Summary Table**  
**Analytical Report 119330**

			Laboratory ID :			729177	
			Client Sample ID :			FHTF-SW-001-052416	
			Date Collected :			5/24/16 19:15	
			Groundwater Remediation Objective				
	CAS No.	Analyte	Units	Class I	Class II	MCL	
VOC	107-06-2	1,2-Dichloroethane	µg/L	5	25	5	<b>0.58 J</b>
	78-93-3	2-Butanone	µg/L	--	--	--	<b>14</b>
	108-10-1	4-Methyl-2-pentanone	µg/L	--	--	--	<b>12</b>
	67-64-1	Acetone	µg/L	6,300	6,300	--	<b>38</b>
	71-43-2	Benzene	µg/L	5	25	5	<b>23</b>
	100-41-4	Ethylbenzene	µg/L	700	1,000	700	<b>6.8</b>
	98-82-8	Isopropylbenzene	µg/L	--	--	--	<b>0.77</b>
	179601-23-1	m,p-Xylene	µg/L	10,000	10,000	--	<b>15</b>
	95-47-6	o-Xylene	µg/L	10,000	10,000	--	<b>4.1</b>
	100-42-5	Styrene	µg/L	100	500	100	<b>12</b>
108-88-3	Toluene	µg/L	1,000	2,500	1,000	<b>22</b>	
SVOC	92-52-4	1,1'-Biphenyl	µg/L	--	--	--	<b>6.3</b>
	105-67-9	2,4-Dimethylphenol	µg/L	140	140	--	<b>7.1</b>
	91-57-6	2-Methylnaphthalene	µg/L	--	--	--	<b>4.6</b>
	95-48-7	2-Methylphenol	µg/L	350	350	--	<b>15</b>
	1319-77-3	3 & 4-Methylphenol	µg/L	--	--	--	<b>4.0 J</b>
	83-32-9	Acenaphthene	µg/L	420	2,100	--	<b>0.91 J</b>
	208-96-8	Acenaphthylene	µg/L	--	--	--	<b>2.8</b>
	98-86-2	Acetophenone	µg/L	--	--	--	<b>17</b>
	120-12-7	Anthracene	µg/L	2,100	10,500	--	<b>0.97 J</b>
	56-55-3	Benz(a)anthracene	µg/L	0.13	0.65	--	<b>0.52 J</b>
	50-32-8	Benzo(a)pyrene	µg/L	0.2	2	0.2	<b>0.32 J</b>
	205-99-2	Benzo(b)fluoranthene	µg/L	0.18	0.9	--	<b>0.49 J</b>
	191-24-2	Benzo(g,h,i)perylene	µg/L	--	--	--	<b>0.38 J</b>
	117-81-7	Bis(2-ethylhexyl)phthalate	µg/L	6	60	6	<b>1 J</b>
	218-01-9	Chrysene	µg/L	1.5	7.5	--	<b>0.75 J</b>
	132-64-9	Dibenzofuran	µg/L	--	--	--	<b>0.33 J</b>
	206-44-0	Fluoranthene	µg/L	280	1,400	--	<b>1.1</b>
	86-73-7	Fluorene	µg/L	280	1,400	--	<b>2.1</b>
	193-39-5	Indeno(1,2,3-cd)pyrene	µg/L	0.43	2.15	--	<b>0.18 J</b>
	91-20-3	Naphthalene	µg/L	140	220	--	<b>11</b>
	86-30-6/122-39-4	N-Nitrosodiphenylamine & Diphn	µg/L	3.2	16	--	<b>2.5</b>
	85-01-8	Phenanthrene	µg/L	--	--	--	<b>3.3</b>
	108-95-2	Phenol	µg/L	100	100	--	<b>1.6 J</b>
	129-00-0	Pyrene	µg/L	210	1,050	--	<b>1.4</b>

Notes:

Contaminants that are shaded exceed at least one remedial objective.

CAS Chemical Abstracts Service

J Estimated quantity

MCL Maximum Contaminant Load

µg/L Micrograms per Liter

SVOC Semivolatile Organic Compound

VOC Volatile Organic Compound

\* - Class II objective may be higher depending on sample pH.

**Table C**  
**Data Summary Table**  
**Analytical Report 16051170**

			Laboratory ID :		16051170-001		
			Client Sample ID :		FHTF-SW-002-052616		
			Date Collected :		05/26/2016 13:00		
				Groundwater Remediation Objective		MCL	
	CAS No.	Analyte	Units	Class I	Class II		
VOC	67-64-1	Acetone	mg/L	6.3	6.3	--	<b>1</b>
	71-43-2	Benzene	mg/L	0.005	0.025	0.005	<b>0.26</b>
	78-93-3	2-Butanone	mg/L	--	--	--	<b>0.39</b>
	100-41-4	Ethylbenzene	mg/L	0.7	1.0	0.7	<b>0.03</b>
	108-10-1	4-Methyl-2-pentanone	mg/L	--	--	--	<b>0.58</b>
	108-88-3	Toluene	mg/L	1.0	2.5	1	<b>0.2</b>
	1330-20-7	Xylenes, Total	mg/L	10.0	10.0	10	<b>0.073</b>
SVOC	62-53-3	Aniline	mg/L	--	--	--	<b>0.9</b>
	65-85-0	Benzoic acid	mg/L	28	28	--	<b>33</b>
	100-51-6	Benzyl alcohol	mg/L	--	--	--	<b>0.14</b>
	105-67-9	2,4-Dimethylphenol	mg/L	0.14	0.14	--	<b>0.21</b>
	95-48-7	2-Methylphenol	mg/L	0.35	0.35	--	<b>0.99</b>
	106-44-5	4-Methylphenol	mg/L	--	--	--	<b>0.61</b>
	91-20-3	Naphthalene	mg/L	0.14	0.22	--	<b>0.0068 J+</b>
	108-95-2	Phenol	mg/L	0.1	0.1	--	<b>1.7</b>
	110-86-1	Pyridine	mg/L	--	--	--	<b>0.081</b>
INORG	7440-38-2	Arsenic	mg/L	0.05	0.2	0.01	<b>0.0043</b>
	7440-39-3	Barium	mg/L	2.0	2.0	2	<b>0.084</b>
	7439-92-1	Lead	mg/L	0.0075	0.1	0.015	<b>0.0038</b>
	7782-49-2	Selenium	mg/L	0.05	0.05	0.05	<b>0.014</b>
TPH		TPH (GRO)	mg/L	--	--	--	<b>1.9</b>
		TPH (DRO)	mg/L	--	--	--	<b>8.8</b>
		TPH (ERO)	mg/L	--	--	--	<b>0.15</b>

Notes:

Contaminants that are shaded exceed at least one remedial objective.

CAS Chemical Abstracts Service

DRO Diesel Range Organics

ERO Extended Range Organics

GRO Gasoline Range Organics

INORG Inorganic

J+ Estimated quantity that may be biased high

MCL Maximum Contaminant Load

mg/L Milligrams per Liter

SVOC Semivolatile Organic Compound

TPH Total Petroleum Hydrocarbons

VOC Volatile Organic Compound

\* - Class II objective may be higher depending on sample pH.

**APPENDIX C**  
**AIR MONITORING SUMMARY LOGS**  
(4 Pages)

**AIR MONITORING SUMMARY**  
**FORD HEIGHTS TIRE FIRE - ER**  
**MAY 24, 2016 (PM) TO MAY 25, 2016 (AM)**

Weather Report (Weather Underground)					
Screening Criteria		Action Levels <sup>†</sup>	FHTF-AMP-01 (Upwind)	FHTF-AMP-02 (Downwind)	FHTF-AMP-03 (School)
<b>Particulate Monitoring (DustTrak DRX)</b>					
Run Time		--	NA	NA	NA
PM1 (mg/m <sup>3</sup> )	Peak	2.5	NA	NA	NA
	TWA		NA	NA	NA
PM2.5 (mg/m <sup>3</sup> )	Peak	2.5	NA	NA	NA
	TWA		NA	NA	NA
PM4 (mg/m <sup>3</sup> )	Peak	2.5	NA	NA	NA
	TWA		NA	NA	NA
PM10 (mg/m <sup>3</sup> )	Peak	2.5	NA	NA	NA
	TWA		NA	NA	NA
Total (mg/m <sup>3</sup> )	Peak	2.5	NA	NA	NA
	TWA		NA	NA	NA
<b>Multi-Gas Monitoring (AreaRAE)</b>					
Run Time		--	18:18 (5/24/16) to 02:14 (5/25/16)	18:18 (5/24/16) to 00:08 (5/25/16)	NA
VOC (ppm)	High	2.5	0.2	12.7	NA
	Average		0.0	0.7	NA
LEL (%)	High	5	0.0	0.0	NA
	Average		0.0	0.0	NA
HCL (ppm)	High	2.5	NA	1.2	NA
	Average		NA	0.7	NA
HCN (ppm)	High	5	0.2	NA	NA
	Average		0.0	NA	NA

**Notes**

Mobile air monitoring conducted with a MultiRAE Pro indicated a maximum VOC reading of 35,000 ppb within the smoke plume.

**Notes:**

- † Action levels are based on half of the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) for each particular compound. For VOCs, the action level is based off one half the OSHA PEL for Benzene (5 ppm).
- % Percentage
- °F Degrees Fahrenheit
- Avg. Mathematical average over the noted time period
- in. Inch
- mg/m<sup>3</sup> Milligrams per cubic meter
- mph Miles per hour
- NA Not analyzed
- ppm parts per million
- TWA Time-weighted average

**AIR MONITORING SUMMARY**  
**FORD HEIGHTS TIRE FIRE - ER**  
**MAY 25, 2016 (AM) TO MAY 26, 2016 (AM)**

Weather Report (Weather Underground)				
Weather Station:		Lansing Municipal (KIGQ)	Wind Direction:	SSW
Temperature:		55 to 86 °F	Precipitation:	0.00 in.
Wind:		7 to 18 mph	Conditions:	Clear
Real-Time Air Monitoring				
Screening Criteria		Action Levels <sup>†</sup>	FHTF-AMP-01 (Upwind)	FHTF-AMP-02 (Downwind)
Particulate Monitoring (DustTrak DRX)				
Run Time		--	14:17 (5/25/16) to 21:47 (5/25/16)	14:01 (5/25/16) to 02:01 (5/26/16)
PM1 (mg/m <sup>3</sup> )	Peak	2.5	0.607	0.189
	TWA		0.032	0.007
PM2.5 (mg/m <sup>3</sup> )	Peak	2.5	0.622	0.333
	TWA		0.033	0.011
PM4 (mg/m <sup>3</sup> )	Peak	2.5	0.634	0.341
	TWA		0.035	0.011
PM10 (mg/m <sup>3</sup> )	Peak	2.5	0.684	0.345
	TWA		0.039	0.013
Total (mg/m <sup>3</sup> )	Peak	2.5	0.711	0.355
	TWA		0.039	0.018
Multi-Gas Monitoring (AreaRAE)				
Run Time		--	13:47 (5/25/16) to 06:43 (5/26/16)	13:45 (5/25/16) to 09:01 (5/26/16)
VOC (ppm)	Peak	2.5	1.1	3.6
	Average		0.6	0.2
LEL (%)	Peak	5	0.0	0.0
	Average		0.0	0.0
HCL (ppm)	Peak	2.5	NA	1.6
	Average		NA	0.2
HCN (ppm)	Peak	5	0.0	NA
	Average		0.0	NA

**Notes**

Mobile air monitoring conducted with UltraRAE 3000 with Benzene Separation (Sep) tubes did not indicate the presence of benzene in the smoke plume or at the downwind location.

**Notes:**

- † Action levels are based on half of the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) for each particular compound. For VOCs, the action level is based off one half the OSHA PEL for Benzene (5 ppm).
- % Percentage
- °F Degrees Fahrenheit
- Avg. Mathematical average over the noted time period
- in. Inch
- mg/m<sup>3</sup> Milligrams per cubic meter
- mph Miles per hour
- NA Not analyzed
- ppm parts per million
- TWA Time-weighted average

**AIR MONITORING SUMMARY**  
**FORD HEIGHTS TIRE FIRE - ER**  
**MAY 26, 2016 (AM) TO MAY 27, 2016 (AM)**

Weather Report (Weather Underground)				
Weather Station:		Lansing Municipal (KIGQ)	Wind Direction:	SSW
Temperature:		55 to 86 °F	Precipitation:	0.00 in.
Wind:		7 to 18 mph	Conditions:	Clear
Real-Time Air Monitoring				
Screening Criteria		Action Levels <sup>†</sup>	FHTF-AMP-01 (Upwind)	FHTF-AMP-02 (Downwind)
Particulate Monitoring (DustTrak DRX)				
Run Time		--	15:31 (5/26/16) to 08:06 (5/27/16)	08:29 (5/26/16) to 07:54 (5/27/16)
PM1 (mg/m <sup>3</sup> )	Peak	2.5	0.016	0.015
	TWA		0.006	0.003
PM2.5 (mg/m <sup>3</sup> )	Peak	2.5	0.019	0.016
	TWA		0.006	0.003
PM4	Peak	2.5	0.022	0.016
	TWA		0.007	0.005
PM10	Peak	2.5	0.027	0.017
	TWA		0.007	0.004
Total	Peak	2.5	0.027	0.029
	TWA		0.007	0.008
Multi-Gas Monitoring (AreaRAE)				
Run Time		--	09:47 (5/26/16) to 08:23 (5/27/16)	09:36 (5/26/16) to 08:00 (5/27/16)
VOC (ppm)	High	2.5	0.0	0.0
	Average		0.0	0.0
LEL (%)	High	5	0.0	0.0
	Average		0.0	0.0
HCL (ppm)	High	2.5	NA	1.1
	Average		NA	0.2
HCN (ppm)	High	5	0.0	NA
	Average		0.0	NA

**Notes:**

- † Action levels are based on half of the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) for each particular compound. For VOCs, the action level is based off one half the OSHA PEL for Benzene (5 ppm).
- % Percentage
- °F Degrees Fahrenheit
- Avg. Mathematical average over the noted time period
- in. Inch
- mg/m<sup>3</sup> Milligrams per cubic meter
- mph Miles per hour
- NA Not analyzed
- ppm parts per million
- TWA Time-weighted average

**AIR MONITORING SUMMARY**  
**FORD HEIGHTS TIRE FIRE - ER**  
**MAY 27, 2016 (AM) TO MAY 28, 2016 (AM)**

Weather Report (Weather Underground)				
Weather Station:		Lansing Municipal (KIGQ)	Wind Direction:	SSW
Temperature:		55 to 86 °F	Precipitation:	0.00 in.
Wind:		7 to 18 mph	Conditions:	Clear
Real-Time Air Monitoring				
Screening Criteria		Action Levels <sup>†</sup>	FHTF-AMP-01 (Upwind)	FHTF-AMP-02 (Downwind)
Particulate Monitoring (DustTrak DRX)				
Run Time		--	08:07 (5/27/16) to 02:07 (5/28/16)	07:57 (5/27/16) to 01:57 (5/28/16)
PM1 (mg/m <sup>3</sup> )	Peak	2.5	0.048	0.014
	TWA		0.012	0.003
PM2.5 (mg/m <sup>3</sup> )	Peak	2.5	0.048	0.015
	TWA		0.012	0.004
PM4 (mg/m <sup>3</sup> )	Peak	2.5	0.048	0.015
	TWA		0.013	0.004
PM10 (mg/m <sup>3</sup> )	Peak	2.5	0.049	0.017
	TWA		0.014	0.005
Total (mg/m <sup>3</sup> )	Peak	2.5	0.049	0.031
	TWA		0.014	0.008
Multi-Gas Monitoring (AreaRAE)				
Run Time		--	09:37 (5/27/16) to 13:36 (5/28/16)	09:40 (5/27/16) to 13:23 (5/28/16)
VOC (ppm)	High	2.5	0.0	0.0
	Average		0.0	0.0
LEL (%)	High	5	0.0	0.0
	Average		0.0	0.0
HCL (ppm)	High	2.5	NA	0.5
	Average		NA	0.1
HCN (ppm)	High	5	0.2	NA
	Average		0.0	NA

**Notes:**

- † Action levels are based on half of the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) for each particular compound. For VOCs, the action level is based off one half the OSHA PEL for Benzene (5 ppm).
- % Percentage
- °F Degrees Fahrenheit
- Avg. Mathematical average over the noted time period
- in. Inch
- mg/m<sup>3</sup> Milligrams per cubic meter
- mph Miles per hour
- NA Not analyzed
- ppm parts per million
- TWA Time-weighted average

**APPENDIX D**  
**PHOTOGRAPHIC LOG**  
(25 Pages)



**OFFICIAL PHOTOGRAPH NO. 1**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast      **Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of the tire fire and fire suppression efforts at the time of arrival for  
Environmental Protection Agency (EPA) and Superfund Technical Assessment and  
Response Team (START) personnel.



**OFFICIAL PHOTOGRAPH NO. 2**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** East      **Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of the upwind AreaRAE location (FHTF-AMP-01) in relation to the tire fire.



**OFFICIAL PHOTOGRAPH NO. 3  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast

**Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** Additional view of the upwind AreaRAE location (FHTF-AMP-01).



**OFFICIAL PHOTOGRAPH NO. 4**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast      **Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of START personnel using a YSI to take water quality readings at the outfall  
(FHTF-WQMP-01) at the southeastern corner of the All American Recycling property.



**OFFICIAL PHOTOGRAPH NO. 5**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** South      **Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of the outlet from the outfall located at the southeastern corner of the All American Recycling property.



**OFFICIAL PHOTOGRAPH NO. 6**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast

**Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** View of the smoke and steam coming off the tire fire.



**OFFICIAL PHOTOGRAPH NO. 7  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Northeast      **Date:** May 24, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of START personnel collecting water quality parameters at FHTF-WQMP-03.



**OFFICIAL PHOTOGRAPH NO. 8**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of smoke billowing from a flare up that had occurred before EPA and START personnel arrived on-site on May 25, 2016.



2016. 5.25 9:51

**OFFICIAL PHOTOGRAPH NO. 9  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** South      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of charred tire remains that had been spread out by GMI Recycling personnel in  
order to aid with fire suppression.



**OFFICIAL PHOTOGRAPH NO. 10**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** South      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of a firefighter spraying water on a tire pile that had flared up. In the foreground, a pond of fire suppression runoff can be observed.



2016 5 25 9 58

**OFFICIAL PHOTOGRAPH NO. 11  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Northeast      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of a fire suppression runoff water mixed with piles of charred tire remains.



**OFFICIAL PHOTOGRAPH NO. 12**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast

**Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** View of smoke billowing from another flare up.



**OFFICIAL PHOTOGRAPH NO. 13**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of GMI Recycling personnel using heavy equipment to spread out tire smoldering tire remains.



2016 / 5 / 25 / 11:22

**OFFICIAL PHOTOGRAPH NO. 14  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** South      **Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of absorbent boom that EPA and START personnel deployed at the outlet of the outfall in order to prevent any petroleum from escaping into the retention pond.



**OFFICIAL PHOTOGRAPH NO. 15**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** East

**Date:** May 25, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** View of a DustTrak DRX that was deployed with at FHTF-AMP-01.



**TETRATECH**

D-15

TDD No. S05-0001-1605-016  
Ford Heights Tire Fire ER



**OFFICIAL PHOTOGRAPH NO. 16**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)      **Witness:** Chris Burns, Tetra Tech

**Subject:** View of the site upon the arrival of EPA and START personnel on the morning of May 26, 2016.



**OFFICIAL PHOTOGRAPH NO. 17**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** East      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of charred tire remains that had been spread out by GMI Recycling personnel.



**OFFICIAL PHOTOGRAPH NO. 18**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** South      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of GMI Recycling personnel using heavy equipment to move piles of charred tire remains.



**OFFICIAL PHOTOGRAPH NO. 19**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** West      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of GMI Recycling personnel using heavy equipment to move piles of charred tire remains.



**OFFICIAL PHOTOGRAPH NO. 20**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** East      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of GMI Recycling contractor (Ziron Environmental Services) dropping off a 20,000-gallon frac tank to contain the water from the retention pond.



**OFFICIAL PHOTOGRAPH NO. 21**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** East      **Date:** May 26, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of fire suppression runoff that had ponded in between smoldering tire piles.



2016 5.27 7:15

**OFFICIAL PHOTOGRAPH NO. 22  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** Southeast

**Date:** May 27, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** View of the site upon the arrival of START personnel on May 27, 2016.



**TETRA TECH**



2016. 5. 27. 10:08

**OFFICIAL PHOTOGRAPH NO. 23  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** NA

**Date:** May 27, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

**Subject:** View of petroleum sheen in ponding of fire suppression runoff.



**TETRATECH**



**OFFICIAL PHOTOGRAPH NO. 24**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016      **Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** North      **Date:** May 27, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.      **Witness:** Chris Burns, Tetra Tech  
(Tetra Tech)

**Subject:** View of a 3-inch trash pump being used to pump water from the outfall into the frac tank.



**OFFICIAL PHOTOGRAPH NO. 25**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD No.:** S05-0001-1605-016

**Location:** Ford Heights Tire Fire ER  
1703 Cottage Grove Avenue  
Ford Heights, Illinois 60411

**Orientation:** North

**Date:** May 28, 2016

**Photographer:** Matt Villicana, Tetra Tech, Inc.  
(Tetra Tech)

**Witness:** Chris Burns, Tetra Tech

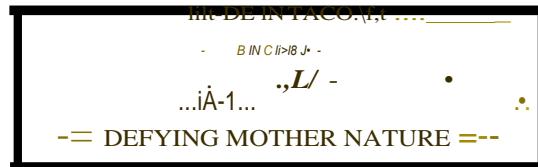
**Subject:** View of the site upon the arrival of START personnel on May 28, 2016.

**APPENDIX E**  
**START FIELD LOGBOOK NOTES**  
(8 Pages)

**S** C  
I I I  
I S I  
**3**

- . . .

INCH



2 Name

**Address** \_\_\_\_\_

## START FIELD LOGBOOK

Logbook Tracking Number LH:('d5

Site Name *k;z.o* *fltrt61J* *7Jg,c* *Foor - Ell.*

Issue to mo<sup>3/4</sup>\};!!c o. CL

Date Issued : - 010-d,01 L,

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RiteintheRain.com

2

## FORD HEIGHTS TIRE FIRE

5/24/16

- 1755 START ARRIVED ON-SITE. OSC BROWN ARRIVED AT THE SAME TIME. WEATHER: 80°, CLOUDY SKIES, BREEZY WINDS FROM THE SOUTHWEST. A LARGE AMOUNT OF GRAY SMOKE IS BILLOWING FROM THE TIRE FIRE.
- 1815 START CALIBRATING THE ARGO ARADS FOR DEPLOYMENT. ONE ARAD WAS BE DEPLOYED UPWARD AND ONE DOWNWARD.
- 1830 ARGARADS DEPLOYED AT UPWARD (ARGO-01) & DOWNWIND (ARGO-02) LOCATIONS.
- 1843 START USING THE YSI TO COLLECT READINGS FROM A BOX CULVERT THAT LEADS INTO A RETAINING POND SOUTH OF THE SOUTHERN ADJOINING PROPERTY (ALL AMERICAN ROCKWELL).
- WQMP-01
- TEMP(C) 22.3
- D.O. 7.0 mg/l 80%
- pH 7.07
- ORP -236 mV
- TDS 0.260 g/l
- S.C. 1.70 µS/cm

*Meteo*

3

5/24/16

## FORD HEIGHTS TIRE FIRE

- 1915 START USING THE YSI TO TAKE PARAMETERS FROM AN UPSTREAM LOCATION OF DUCK CREEK.
- WQMP-02
- TEMP 22.34 °C
- D.O. 10.98 mg/l 127.3%
- pH 8.31
- ORP -3.5 mV
- TDS 1.174 g/l
- S.C. 1.806 µS/cm
- 1931 START USING THE YSI TO COLLECT WATER QUALITY PARAMETERS FROM A DOWNSTREAM LOCATION OF DUCK CREEK.
- WQMP-03
- TEMP 21.45 °C
- D.O. 10.95 mg/l 125%
- pH 8.25
- ORP -9.8 mV
- TDS 1.117 g/l
- S.C. 1.718 µS/cm
- 2000 START COLLECTED A SURFACE WATER SAMPLE FOR VOC + SVOCs FROM FIRE SPILLAGE RUNOFF. CPA USED 2M STRIPS TO ANALYZE RUNOFF

*Altitude*

Rate in the Rain

First attempts 7/24/16

8800 SEPARATORS LOCATED IN BURROW AREAS  
ON-SITE. METHODS FOR DETERMINING  
AND-128 WENTURE 80' CLEAR STONES.  
WIND BLOW THRU SOUTHWEST.

A 24-HOUR SPHERES STARTING VACUUM  
= -29.

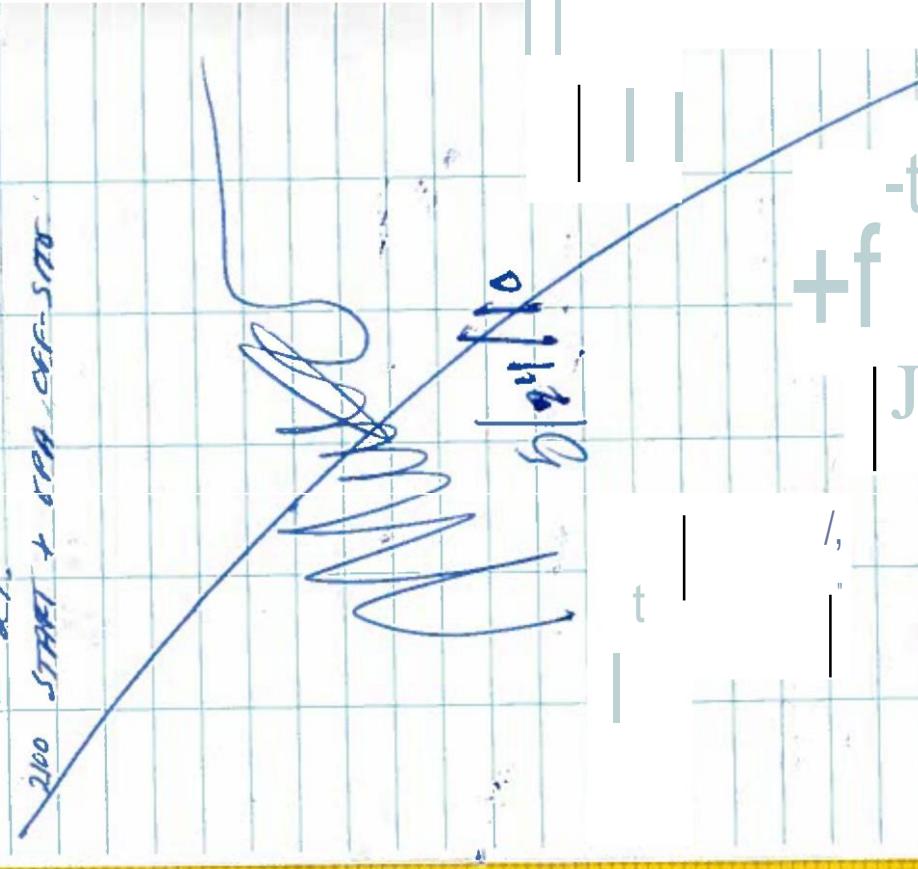
200 STREET + 500 OFF-SITE

8800	STRAIGHT COLLECTORS	WATER-QUALITY
OFF	53 m/s	m/s
TDS	0.490 g/l	m/s
pH	7.14	m/s
DO	7.82 mg/l DO	m/s
TEMP	18.62 °C	m/s
PARAMETERS	STRAIGHT COLLECTORS	WATER-QUALITY
8800	STRAIGHT COLLECTORS	WATER-QUALITY
OFF	53 m/s	m/s
TDS	0.490 g/l	m/s
pH	7.14	m/s
DO	7.82 mg/l DO	m/s
TEMP	19.9 °C	m/s
PARAMETERS	STRAIGHT COLLECTORS	WATER-QUALITY
8800	STRAIGHT COLLECTORS	WATER-QUALITY
OFF	79.9 m/s	m/s
TDS	1.20 g/l	m/s
pH	7.84	m/s
DO	7.82 mg/l DO	m/s
TEMP	18.6 °C	m/s
PARAMETERS	STRAIGHT COLLECTORS	WATER-QUALITY
8800	STRAIGHT COLLECTORS	WATER-QUALITY
OFF	79.9 m/s	m/s
TDS	1.20 g/l	m/s
pH	7.84	m/s
DO	7.82 mg/l DO	m/s
TEMP	18.6 °C	m/s

Rite in the Rain  
*Abdullah*

fixed float on zero float 7/24/16  
water. The motor was removed at

2024 second collection places at the  
Aero-ae (bottoming) location for  
A 24-hour spheres starting vacuum  
= -29.



## Scars Heights - New Fane

- 0850 Arrived - Town down to download  
the data.
- 0855 Gears started 0855-0900-0925 a/c  
Collected from a man that came in  
Town
- 0910-0920 START collected - rain gauge at  
3 locations, 1st not sealed + damaged,  
and within Residential Neighborhood.  
School & School Road - m  
50' up 100' up 2000ft Vac - m  
0.5pm 0 0 HCN - m  
0 0 0 H<sub>2</sub>S - m  
0 0 0 Benzene - m  
/per open + some streams w/ downward  
slope to Grant's school for download  
AERARAC School Power Pac, Asst. Scientist,  
+ representative of Aerarac to discuss  
concerns (closed Houghton 168 school district)
- 1007 2000 feet down town at surface in  
southeast corner of property on  
Gulfco (Aero - 03)
- 1120 Conducting air rendering to  
Community Center - m  
Hac yearns HCN 0 H<sub>2</sub>S 0 - m

## Loco Station: New Fane

- 5/6/10
- 1145 START Burns off - 5170-  
1150 STREET Burnt - Hatchets removed  
on 5/10.
- 1210 STREET + 0000 Do - m  
Above the Calo - J  
outfall Channel - J  
rotation point
- 1245 STREET + SPA off - 5170 to  
1330 STREET + 0000 Back on -  
1345 - STREET Take Burn off and  
equipment to car 102970 +  
logging issues w/ power rd  
- START Burns removed  
WITH DUST TRAILS.
- 1400 DUST TRAILS + AREA 2005  
At open + downwind
- 1630 AERARAC from Aero - 03  
burn
- 1635 A fast-moving storm  
the area and caused  
1710 START + off off - 5170.
- ~~5/6~~

FORD HEIGHTS TIRE FIRE 5/26/16

- 0820 START (VILLICANA) ARRIVED ON-SITE. WEATHER: 20°, OVERCAST, BREEZY WINDS FROM THE SOUTH.
- 0830 - EPA OSG DAN HAAS ARRIVED ON-SITE.  
- STREET VILLICANA CHECKING ON AIR MONITORING EQUIPMENT AND REMOVING AREARADS FOR DATA DOWNLOAD + RECALIBRATION.
- 0840 START (SCHULTZ) ARRIVED ON-SITE.
- 0900 EPA OS ARRIVED ON-SITE.
- 0915 START DOWNLOADING DATA FROM THE AREARADS.
- 0930 START RECALIBRATING THE AREARADS.
- 1000 START REDEPLOYING THE AREARADS AT THE ON-SITE AND SCHOOL LOCATIONS.
- 1045 START COLLECTING WATER QUALITY PARAMETERS AT WQMP-03  
TEMP 21.03°C  
D.O. 9.6 mg/l 121%  
pH 7.81  
ORP 101.1 mV  
TDS 1,211 g/l  
S.C. 1.864 μS/cm

~~Matt~~

FORD HEIGHTS TIRE FIRE

5/26/16

- 1108 START COLLECTING WATER QUALITY PARAMETERS AT WQMP-01  
TEMP 19.81°C  
D.O. 7.60 mg/l 28.8%  
pH 7.15  
ORP 54 mV  
TDS 0.713 g/l  
S.C. 1.113 μS/cm
- 1300 START COLLECTION FHTF-SW-002-056 FROM THE ROTONTION POND RIGHT BY THE OUTFALL OUTLET.
- 1455 ZIRON BROUGHT A FRAC TANK AND UNLOADED IT RIGHT BY THE OUTFALL TO START CONTAINING THE FIRE SUPPRESSION RUNOFF.
- 1555 START + EPA ENTRUD T210 TIRE STORAGE AREA TO CHECK ON PROGRESS. GMI PERSONNEL ARE USING HEAVY EQUIPMENT TO CREATE FIRE ROWS IN THE TIRES.
- 1725 START AND EPA CHECKING ON PROGRESS OF PUMPING WATER INTO THE FRAC TANK. NO PROGRESS WAS MADE DUE TO A MALFUNCTIONING PUMP.

~~Matt~~

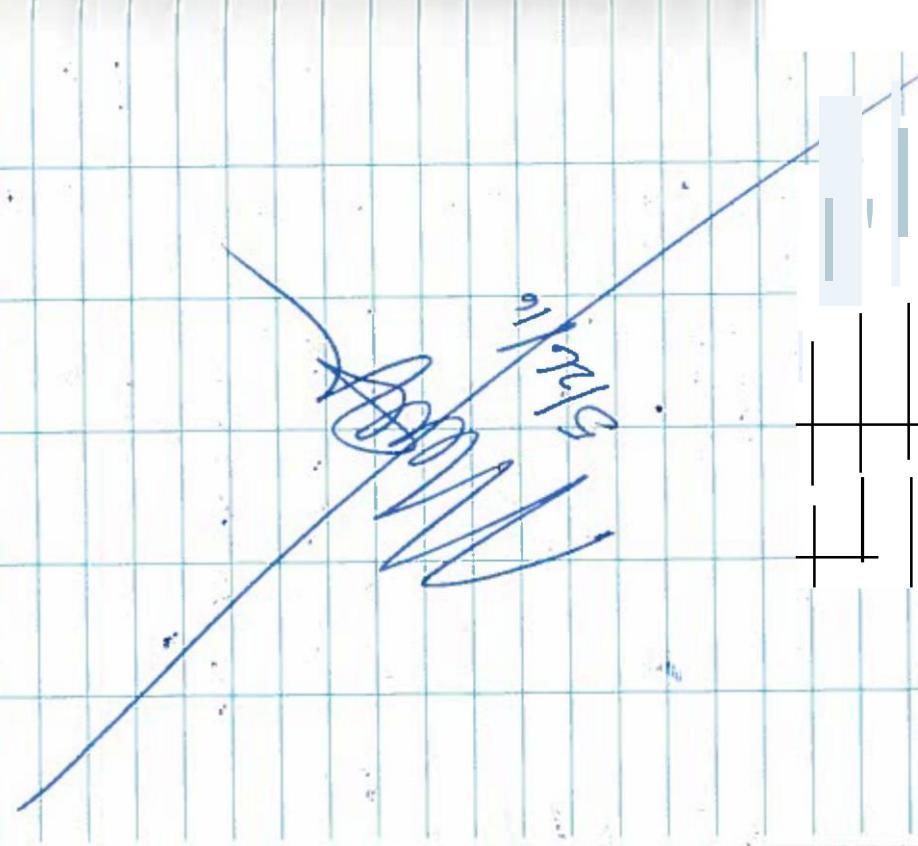
Rite in the Rain

Good Flights Tire Fire		05/27/16
0750	START UNLOADING ARRIVED ONE-SITE	
0800	WEATHER: 68°, OVERCAST, DIZZY WINDS FROM THE SW	
0855	START TAKING DOWN TIRE AREA RACES FOR DATA DOWNLOAD + RECREATE	
0900	START ALSO TOPLINK DUOTRAK BANDS SPPA OSC DAN HAGS ARRIVED ONE-SITE	
0930	START POWERADING THE DATA FROM THE AREA RACES	
0945	START RECALIBRATING THO AREA RACES	
0950	START PRODUCING THE AREA AREA AT THE ONE-SITE AND SCHOOL COCOS	
1020	START COLLECTING WATER QUANTITY PACEMETERS AT WAMP-03	
	Temp 21.60°C	
	D.O 13.80 mg/L 55%	
	pH 7.84	
	ORP 110.8mV	
	TDS 1.107 g/L	
	S.C. 1.704 mS/cm	
1045	START CONNECTING WATER QUALITY PARAMETERS AT WAMP-01	

Peter Mohr

Mohr

025 21.60 PERSONNEL NOT ON-SITE  
NOV 15 THO 3: TRASH PUMP  
SINCE THEY ARE BOTTLING IT  
SERVICED OR REPLACED  
1010 START + SPA OFF-SITE →  
1040



## Ford Heights Fire 5/27/16.

- 1045 Time 19.69°C  
DO 7.14 78%  
FH 7.08  
OEP 6.4 ml  
TDS 0.616 g/l  
S.C. 1.124  $\mu$ s/cm
- START AND EPA MEETING WITH  
14 EPA TO DISCUSS FURTHER ACTION
- 1200 START AND EPA CHECKING ON  
AMOUNT OF WATER CONTAINERIZED.  
THE FITAC TANK IS NEARLY FULL  
ACCORDING TO ZIRCON.
- 1258 START OFF-SITE.

*5/27/16*

## Ford Heights Fire 5/28/16.

- 1130 START (WEDNESDAY) AREA WAS  
WEATHER 28°F, PARTLY CLOUDY, HUMID  
CALM WINDS ONLY ONE CAR  
EMPLOYEE IS WORKING TO MOVE  
PILES AROUND AND CREATE WIND  
ROWS.
- 1300 EPA OSC IS DRAWN IN FOR A  
START THAT HE WOULD NOT  
MAKE IT TO THE SITE.
- 1305 START TAKING DOWN AIR MONITORING EQUIPMENT.
- 1358 START OFF-SITE.

*5/28/16*

*Ronie Schum*

**APPENDIX F**  
**DATA VALIDATION REPORTS**  
(33 Pages)



June 20, 2016

Mr. Jaime Brown  
On-Scene Coordinator  
U.S. Environmental Protection Agency Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

**Subject:**      **Data Validation Report – Analytical Report 1602767**  
**Ford Heights Tire Fire**  
**EPA Contract No. EP-S5-13-01**  
**Technical Direction Document No. S05-0001-1605-016**  
**Document Tracking No. 0841**

Dear Mr. Brown:

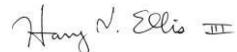
Tetra Tech Inc. (Tetra Tech) is submitting this Data Validation Report for two air samples collected at the Ford Heights Tire Fire site. The samples were collected on May 25, 2016, and were analyzed for volatile organic compounds (VOC) by the ALS Environmental Laboratory in Simi Valley, California. The laboratory data package was received on June 7.

Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014).

The analysis went well, with no qualifications. All data may be used as reported.

If you have any questions regarding this data validation report, please call me at (312) 201-7756.

Sincerely,

A handwritten signature in black ink that reads "Nancy J. Ellis III".

START Chemist

Enclosure

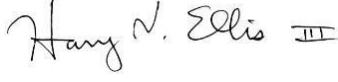
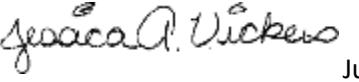
cc:      Kevin Scott, Tetra Tech Program Manager  
          Matt Villicana, Tetra Tech Project Manager  
          TDD File

**ATTACHMENT 1**

**DATA VALIDATION REPORT**

**ALS LABORATORY REPORT NO. 1602767**

**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

<b>Site Name</b>	Ford Heights Tire Fire	<b>TDD No.</b>	0001-1605-016
<b>Document Tracking No.</b>	0841		
<b>Data Reviewer (signature and date)</b>	 8 June 2016	<b>Technical Reviewer (signature and date)</b>	 June 9, 2016
<b>Laboratory Report No.</b>	1602767	<b>Laboratory</b>	ALS Environmental/Simi Valley, California
<b>Analyses</b>	Volatile organic compounds (VOC) by Method TO-15		
<b>Samples and Matrix</b>	Two ambient air samples		
<b>Field Duplicate Pairs</b>	None		
<b>Field Blanks</b>	None		

## INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014).

## OVERALL EVALUATION

The analyses went well, with no data rejected or qualified. All results may be used as reported.

### Data completeness:

Within Criteria	Exceedance/Notes
Y	Summary report, as requested.

### Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**System monitoring compounds (surrogates and labeled compounds):**

Within Criteria	Exceedance/Notes
Y	

**MS/MSD:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
NA	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
Y	

**Sample dilutions:**

Within Criteria	Exceedance/Notes
Y	Different sample volumes (less than the standard 1.0 liter) were used for the two samples to keep the VOC concentrations within calibration range. Only one such dilution (4- and 25-fold) was reported for each sample.

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Note "Sample Dilutions" above. Relatively low-concentration VOCs would not be detected.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Internal Standards:**

Within Criteria	Exceedance/Notes
Y	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.



# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-01-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-001

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.25 Liter(s)  
 Test Notes:  
 Container ID: AC02077

Initial Pressure (psig): -0.04      Final Pressure (psig): 3.65

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	280	2.5	160	1.5	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	2.5	ND	0.51	U
74-87-3	Chloromethane	ND	1.0	ND	0.48	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.5	ND	0.36	U
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	U
106-99-0	1,3-Butadiene	37	1.0	17	0.45	
74-83-9	Bromomethane	ND	1.0	ND	0.26	U
75-00-3	Chloroethane	ND	1.0	ND	0.38	U
64-17-5	Ethanol	89	25	47	13	
75-05-8	Acetonitrile	10	2.5	5.9	1.5	
107-02-8	Acrolein	ND	10	ND	4.4	U
67-64-1	Acetone	140	25	59	11	
75-69-4	Trichlorofluoromethane	1.2	0.50	0.21	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	25	ND	10	U
107-13-1	Acrylonitrile	ND	2.5	ND	1.2	U
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	U
75-09-2	Methylene Chloride	ND	2.5	ND	0.72	U
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	U
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	U
75-15-0	Carbon Disulfide	ND	25	ND	8.0	U
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	U
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	U
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	U
108-05-4	Vinyl Acetate	ND	25	ND	7.1	U
78-93-3	2-Butanone (MEK)	31	25	11	8.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 DVC\_1602767\_TR Att - FHTF-AA-01-052516 Validated  
 TO15SCAN.XLS - 75 Compounds - PageNo.:

# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-01-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-001

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.25 Liter(s)  
 Test Notes:  
 Container ID: AC02077

Initial Pressure (psig): -0.04      Final Pressure (psig): 3.65

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	U
141-78-6	Ethyl Acetate	ND	5.0	ND	1.4	U
110-54-3	n-Hexane	21	2.5	6.1	0.71	
67-66-3	Chloroform	ND	0.50	ND	0.10	U
109-99-9	Tetrahydrofuran (THF)	ND	2.5	ND	0.85	U
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	U
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	U
71-43-2	Benzene	350	0.50	110	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	U
110-82-7	Cyclohexane	5.7	5.0	1.7	1.5	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	U
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	U
79-01-6	Trichloroethene	ND	0.50	ND	0.093	U
123-91-1	1,4-Dioxane	ND	2.5	ND	0.69	U
80-62-6	Methyl Methacrylate	ND	5.0	ND	1.2	U
142-82-5	n-Heptane	19	2.5	4.7	0.61	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	ND	0.55	U
108-10-1	4-Methyl-2-pentanone	34	2.5	8.3	0.61	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	ND	0.55	U
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	U
108-88-3	Toluene	370	2.5	99	0.66	
591-78-6	2-Hexanone	2.9	2.5	0.70	0.61	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	U
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	U
123-86-4	n-Butyl Acetate	ND	2.5	ND	0.53	U

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 DVC\_1602767\_TR Att - FHTF-AA-01-052516 Validated      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-01-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-001

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.25 Liter(s)  
 Test Notes:  
 Container ID: AC02077

Initial Pressure (psig): -0.04      Final Pressure (psig): 3.65

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	13	2.5	2.8	0.54	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	U
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	U
100-41-4	Ethylbenzene	150	2.5	34	0.58	
179601-23-1	m,p-Xylenes	210	2.5	48	0.58	
75-25-2	Bromoform	ND	2.5	ND	0.24	U
100-42-5	Styrene	68	2.5	16	0.59	
95-47-6	o-Xylene	45	2.5	10	0.58	
111-84-2	n-Nonane	8.3	2.5	1.6	0.48	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	U
98-82-8	Cumene	25	2.5	5.0	0.51	
80-56-8	alpha-Pinene	ND	2.5	ND	0.45	U
103-65-1	n-Propylbenzene	22	2.5	4.4	0.51	
622-96-8	4-Ethyltoluene	49	2.5	10	0.51	
108-67-8	1,3,5-Trimethylbenzene	11	2.5	2.3	0.51	
95-63-6	1,2,4-Trimethylbenzene	28	2.5	5.7	0.51	
100-44-7	Benzyl Chloride	ND	2.5	ND	0.48	U
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	U
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	U
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	U
5989-27-5	d-Limonene	300	2.5	54	0.45	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	ND	0.26	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	ND	0.34	U
91-20-3	Naphthalene	13	2.5	2.5	0.48	
87-68-3	Hexachlorobutadiene	ND	2.5	ND	0.23	U

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 DVC\_1602767\_TR Att - FHTF-AA-01-052516 Validated      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-02-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-002

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.040 Liter(s)  
 Test Notes:  
 Container ID: AC01649

Initial Pressure (psig): -2.57      Final Pressure (psig): 3.64

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	2,200	19	1,300	11	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	19	ND	3.8	U
74-87-3	Chloromethane	ND	7.6	ND	3.7	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	19	ND	2.7	U
75-01-4	Vinyl Chloride	ND	3.8	ND	1.5	U
106-99-0	1,3-Butadiene	210	7.6	93	3.4	
74-83-9	Bromomethane	ND	7.6	ND	1.9	U
75-00-3	Chloroethane	ND	7.6	ND	2.9	U
64-17-5	Ethanol	ND	190	ND	100	U
75-05-8	Acetonitrile	88	19	52	11	
107-02-8	Acrolein	ND	76	ND	33	U
67-64-1	Acetone	360	190	150	79	
75-69-4	Trichlorofluoromethane	ND	3.8	ND	0.67	U
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	190	ND	77	U
107-13-1	Acrylonitrile	ND	19	ND	8.7	U
75-35-4	1,1-Dichloroethene	ND	3.8	ND	0.95	U
75-09-2	Methylene Chloride	ND	19	ND	5.4	U
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.8	ND	1.2	U
76-13-1	Trichlorotrifluoroethane	ND	3.8	ND	0.49	U
75-15-0	Carbon Disulfide	ND	190	ND	61	U
156-60-5	trans-1,2-Dichloroethene	ND	3.8	ND	0.95	U
75-34-3	1,1-Dichloroethane	ND	3.8	ND	0.93	U
1634-04-4	Methyl tert-Butyl Ether	ND	3.8	ND	1.0	U
108-05-4	Vinyl Acetate	ND	190	ND	54	U
78-93-3	2-Butanone (MEK)	ND	190	ND	64	U

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-02-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-002

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.040 Liter(s)  
 Test Notes:  
 Container ID: AC01649

Initial Pressure (psig): -2.57      Final Pressure (psig): 3.64

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.8	ND	0.95	U
141-78-6	Ethyl Acetate	ND	38	ND	10	U
110-54-3	n-Hexane	<b>170</b>	19	<b>47</b>	5.4	
67-66-3	Chloroform	ND	3.8	ND	0.77	U
109-99-9	Tetrahydrofuran (THF)	ND	19	ND	6.4	U
107-06-2	1,2-Dichloroethane	ND	3.8	ND	0.93	U
71-55-6	1,1,1-Trichloroethane	ND	3.8	ND	0.69	U
71-43-2	Benzene	<b>2,600</b>	3.8	<b>810</b>	1.2	
56-23-5	Carbon Tetrachloride	ND	3.8	ND	0.60	U
110-82-7	Cyclohexane	<b>39</b>	38	<b>11</b>	11	
78-87-5	1,2-Dichloropropane	ND	3.8	ND	0.82	U
75-27-4	Bromodichloromethane	ND	3.8	ND	0.56	U
79-01-6	Trichloroethene	ND	3.8	ND	0.70	U
123-91-1	1,4-Dioxane	ND	19	ND	5.2	U
80-62-6	Methyl Methacrylate	ND	38	ND	9.2	U
142-82-5	n-Heptane	<b>150</b>	19	<b>35</b>	4.6	
10061-01-5	cis-1,3-Dichloropropene	ND	19	ND	4.2	U
108-10-1	4-Methyl-2-pentanone	<b>230</b>	19	<b>57</b>	4.6	
10061-02-6	trans-1,3-Dichloropropene	ND	19	ND	4.2	U
79-00-5	1,1,2-Trichloroethane	ND	3.8	ND	0.69	U
108-88-3	Toluene	<b>3,000</b>	19	<b>790</b>	5.0	
591-78-6	2-Hexanone	<b>20</b>	19	<b>5.0</b>	4.6	
124-48-1	Dibromochloromethane	ND	3.8	ND	0.44	U
106-93-4	1,2-Dibromoethane	ND	3.8	ND	0.49	U
123-86-4	n-Butyl Acetate	ND	19	ND	4.0	U

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 DVC\_1602767\_TR Att - FHTF-AA-02-052516 Validated      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## VALIDATED RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-02-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-002

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.040 Liter(s)  
 Test Notes:  
 Container ID: AC01649

Initial Pressure (psig): -2.57      Final Pressure (psig): 3.64

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	100	19	21	4.0	
127-18-4	Tetrachloroethene	ND	3.8	ND	0.56	U
108-90-7	Chlorobenzene	ND	3.8	ND	0.82	U
100-41-4	Ethylbenzene	1,400	19	320	4.3	
179601-23-1	m,p-Xylenes	2,000	19	460	4.3	
75-25-2	Bromoform	ND	19	ND	1.8	U
100-42-5	Styrene	480	19	110	4.4	
95-47-6	o-Xylene	440	19	100	4.3	
111-84-2	n-Nonane	70	19	13	3.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	ND	0.55	U
98-82-8	Cumene	250	19	51	3.8	
80-56-8	alpha-Pinene	ND	19	ND	3.4	U
103-65-1	n-Propylbenzene	220	19	45	3.8	
622-96-8	4-Ethyltoluene	580	19	120	3.8	
108-67-8	1,3,5-Trimethylbenzene	140	19	29	3.8	
95-63-6	1,2,4-Trimethylbenzene	350	19	70	3.8	
100-44-7	Benzyl Chloride	ND	19	ND	3.6	U
541-73-1	1,3-Dichlorobenzene	ND	3.8	ND	0.63	U
106-46-7	1,4-Dichlorobenzene	ND	3.8	ND	0.63	U
95-50-1	1,2-Dichlorobenzene	ND	3.8	ND	0.63	U
5989-27-5	d-Limonene	2,600	19	470	3.4	
96-12-8	1,2-Dibromo-3-chloropropane	ND	19	ND	2.0	U
120-82-1	1,2,4-Trichlorobenzene	ND	19	ND	2.5	U
91-20-3	Naphthalene	210	19	40	3.6	
87-68-3	Hexachlorobutadiene	ND	19	ND	1.8	U

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 DVC\_1602767\_TR Att - FHTF-AA-02-052516 Validated      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_



MECX

8864 Interchange Dr., Houston, TX 77054-2512  
Phone (713) 585-7000 • Fax (713) 585-7049

June 20, 2016

Mr. Jaime Brown  
On-Scene Coordinator  
U.S. Environmental Protection Agency Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

**Subject:** Data Validation Report – Analytical Report 119330  
Ford Heights Tire Fire  
EPA Contract No. EP-S5-13-01  
Technical Direction Document No. S05-0001-1605-016  
Document Tracking No. 0878

Dear Mr. Brown:

Tetra Tech Inc. (Tetra Tech) is submitting this Data Validation Report for one surface water sample collected at the Ford Heights Tire Fire site. The sample was collected on May 24, 2016, and was analyzed for volatile organic compounds and semivolatile organic compounds by the CT Laboratories LLC. The laboratory data package was received on June 10, 2016.

Analytical data were evaluated in general accordance with the EPA **National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (August 2014)**.

No data were rejected based on this validation. The results may be used as qualified.

If you have any questions regarding this data validation report, please call me at (713) 585-7000 ext. 7020.

Sincerely,

Senior Chemist

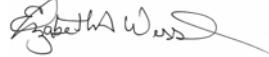
Enclosure

cc: Kevin Scott, Tetra Tech Program Manager  
Matt Villicana, Tetra Tech Project Manager  
TDD File

**ATTACHMENT 1**

**DATA VALIDATION REPORT  
SURFACE WATER SAMPLE COLLECTED MAY 24, 2016**

**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

<b>Site Name</b>	Ford Heights Tire Fire - ER	<b>TDD No.</b>	0001/S05-0001-1605-016
<b>Document Tracking No.</b>	0878		
<b>Data Reviewer (signature and date)</b>	 June 20, 2016	<b>Technical Reviewer (signature and date)</b>	 June 20, 2016
<b>Laboratory Report No.</b>	119330	<b>Laboratory</b>	CT Laboratories
<b>Analyses</b>	Volatile Organic Compounds (VOCs) – SW8260C, Semivolatile Organic Compounds (SVOCs) – SW8270D		
<b>Samples and Matrix</b>	one surface water sample (FHTF-SW-001-052416)		
<b>Field Duplicate Pairs</b>	None		
<b>Field Blanks</b>	None		

#### INTRODUCTION

This checklist summarizes the Stage 2A validation performed by MEC<sup>X</sup>, Inc. on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014).

#### OVERALL EVALUATION

No results required rejection. Data were qualified as indicated below due to one LCS recovery exceedance. The data can be used as qualified.



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	

**Sample preservation, receipt, and holding times:**

Within Criteria	Exceedance/Notes
N	Corrections to the COC were obliterated rather than lined out, and were initialed but not dated. Receipt information did not indicate whether custody seals were present on the cooler. The cooler temperature was within control limits. No qualifications were applied.

**Method blanks:**

Within Criteria	Exceedance/Notes
N	Volatile method blank had 1,4-dioxane reported above the reporting limit, at 83.2 µg/L; however, 1,4-dioxane was not detected in the associated sample. No qualifications were applied.

**Field blanks:**

Within Criteria	Exceedance/Notes
N/A	

**System monitoring compounds (surrogates and labeled compounds):**

Within Criteria	Exceedance/Notes
Y	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**MS/MSD:**

Within Criteria	Exceedance/Notes
Y	Volatile batch MS/MSD only (not performed on the sample in this SDG).

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
N/A	

**Field duplicates:**

Within Criteria	Exceedance/Notes
N/A	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	Volatile LCS: 1,4-dioxane 12% (limits 70-130%), 1,2-dibromo-3-chloropropane 151% (limits 50-130%). Nondetect for 1,4-dioxane qualified as estimated (UJ). Nondetect result for 1,2-dibromo-3-chloropropane required no qualification.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
N/A	

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
N/A	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Analyte quantitation and MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
N/A	

**Other [specify]:**

Within Criteria	Exceedance/Notes
N/A	

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.



# Validated Sample Result Forms: 119330

*Analysis Method SW8260C*

Sample Name	FHTF-SW-001-052416	Lab Sample Name:	729177	Matrix Type:	WG	Sample Date:	5/24/2016	
		Val_Initials: LSC		Date_Reviewed: 20 June 2016				
Analyte	CAS No	Result Value	RL	MDL	Units	Lab Qualifier	Validation Result	Validation Qualifier
1,1,1-Trichloroethane	71-55-6	<	0.50	0.21	ug/L	U	0.50	U
1,1,2,2-Tetrachloroethane	79-34-5	<	0.50	0.19	ug/L	U	0.50	U
1,1,2-Trichloroethane	79-00-5	<	1.0	0.26	ug/L	U	1.0	U
1,1-Dichloroethane	75-34-3	<	0.50	0.20	ug/L	U	0.50	U
1,1-Dichloroethene	75-35-4	<	0.50	0.24	ug/L	U	0.50	U
1,2,3-Trichlorobenzene	87-61-6	<	1.0	0.30	ug/L	U	1.0	U
1,2,4-Trichlorobenzene	120-82-1	<	1.0	0.30	ug/L	U	1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<	1.0	0.40	ug/L	UZ,Q	1.0	U
1,2-Dibromoethane	106-93-4	<	0.50	0.16	ug/L	U	0.50	U
1,2-Dichlorobenzene	95-50-1	<	0.50	0.23	ug/L	U	0.50	U
1,2-Dichloroethane	107-06-2	0.58	1.0	0.30	ug/L	J	0.58	J
1,2-Dichloropropane	78-87-5	<	0.50	0.22	ug/L	U	0.50	U
1,3-Dichlorobenzene	541-73-1	<	1.0	0.26	ug/L	U	1.0	U
1,4-Dichloro-2-butene	764-41-0	<	0.50	0.21	ug/L	U	0.50	U
1,4-Dioxane	123-91-1	<	25	5.0	ug/L	UZ,Q	25	UJ
112Trichloro122trifluoroethane	76-13-1	<	1.0	0.50	ug/L	U	1.0	U
2-Butanone	78-93-3	14	5.0	2.4	ug/L		14	
2-Hexanone	591-78-6	<	10	4.0	ug/L	U	10	U
4-Methyl-2-pentanone	108-10-1	12	10	3.0	ug/L		12	
Acetone	67-64-1	38	10	5.0	ug/L		38	
Benzene	71-43-2	23	0.50	0.19	ug/L		23	
Bromochloromethane	74-97-5	<	0.50	0.19	ug/L	U	0.50	U
Bromodichloromethane	75-27-4	<	0.50	0.20	ug/L	U	0.50	U
Bromoform	75-25-2	<	0.50	0.22	ug/L	U	0.50	U
Bromomethane	74-83-9	<	1.0	0.50	ug/L	UZ	1.0	U
Carbon disulfide	75-15-0	<	1.0	0.50	ug/L	U	1.0	U
Carbon tetrachloride	56-23-5	<	0.50	0.23	ug/L	U	0.50	U
Chlorobenzene	108-90-7	<	0.50	0.24	ug/L	U	0.50	U
Chloroethane	75-00-3	<	1.0	0.40	ug/L	U	1.0	U
Chloroform	67-66-3	<	0.50	0.15	ug/L	U	0.50	U
Chloromethane	74-87-3	<	1.0	0.40	ug/L	U	1.0	U
cis-1,2-Dichloroethene	156-59-2	<	0.50	0.25	ug/L	U	0.50	U
cis-1,3-Dichloropropene	10061-01-5	<	0.50	0.19	ug/L	U	0.50	U
Cyclohexane	110-82-7	<	1.0	0.28	ug/L	U	1.0	U
Dibromochloromethane	124-48-1	<	0.50	0.19	ug/L	U	0.50	U

**Analysis Method      SW8260C**

Dichlorodifluoromethane	75-71-8	<	1.0	0.26	ug/L	U	1.0	U
Ethylbenzene	100-41-4	6.8	0.50	0.22	ug/L		6.8	
Isopropylbenzene	98-82-8	0.77	0.50	0.18	ug/L		0.77	
m & p-Xylene	179601-23-1	15	1.0	0.50	ug/L		15	
Methyl acetate	79-20-9	<	1.0	0.30	ug/L	U	1.0	U
Methyl tert-butyl ether	1634-04-4	<	1.0	0.29	ug/L	U	1.0	U
Methylcyclohexane	108-87-2	<	0.50	0.23	ug/L	U	0.50	U
Methylene chloride	75-09-2	<	2.0	0.40	ug/L	U	2.0	U
o-Xylene	95-47-6	4.1	0.50	0.24	ug/L		4.1	
Styrene	100-42-5	12	0.50	0.20	ug/L		12	
Tetrachloroethene	127-18-4	<	1.0	0.30	ug/L	U	1.0	U
Toluene	108-88-3	22	0.50	0.22	ug/L		22	
trans-1,2-Dichloroethene	156-60-5	<	0.50	0.25	ug/L	U	0.50	U
trans-1,3-Dichloropropene	10061-02-6	<	0.50	0.19	ug/L	U	0.50	U
Trichloroethene	79-01-6	<	0.50	0.21	ug/L	U	0.50	U
Trichlorofluoromethane	75-69-4	<	0.50	0.20	ug/L	U	0.50	U
Vinyl chloride	75-01-4	<	0.50	0.18	ug/L	U	0.50	U

**Analysis Method      SW8270D**

Sample Name	FHTF-SW-001-052416	Lab Sample Name:	729177	Matrix Type:	WG	Sample Date:	5/24/2016	
Analyte	CAS No	Result Value	RL	MDL	Units	Lab Qualifier	Validation Result	Validation Qualifier
1,1'-Biphenyl	92-52-4	6.3	1.0	0.15	ug/L		6.3	
1,2,4,5-Tetrachlorobenzene	95-94-3	<	1.0	0.17	ug/L	U	1.0	U
2,4,5-Trichlorophenol	95-95-4	<	5.1	1.1	ug/L	U	5.1	U
2,4,6-Trichlorophenol	88-06-2	<	5.1	1.0	ug/L	U	5.1	U
2,4-Dichlorophenol	120-83-2	<	5.1	1.0	ug/L	U	5.1	U
2,4-Dimethylphenol	105-67-9	7.1	5.1	0.83	ug/L		7.1	
2,4-Dinitrophenol	51-28-5	<	10	1.5	ug/L	U	10	U
2,4-Dinitrotoluene	121-14-2	<	1.0	0.21	ug/L	U	1.0	U
2,6-Dinitrotoluene	606-20-2	<	1.0	0.28	ug/L	U	1.0	U
2-Chloronaphthalene	91-58-7	<	1.0	0.18	ug/L	U	1.0	U
2-Chlorophenol	95-57-8	<	5.1	0.88	ug/L	U	5.1	U
2-Methylnaphthalene	91-57-6	4.6	1.0	0.17	ug/L		4.6	
2-Methylphenol	95-48-7	15	5.1	0.87	ug/L		15	
2-Nitroaniline	88-74-4	<	2.0	0.22	ug/L	U	2.0	U
2-Nitrophenol	88-75-5	<	5.1	0.91	ug/L	U	5.1	U
3 & 4-Methylphenol	1319-77-3	4.0	9.1	1.4	ug/L	J	4.0	J
3,3'-Dichlorobenzidine	91-94-1	<	2.5	0.67	ug/L	U	2.5	U
3-Nitroaniline	99-09-2	<	2.0	0.26	ug/L	U	2.0	U
4,6-Dinitro-2-methylphenol	534-52-1	<	10	1.6	ug/L	U	10	U
4-Bromophenyl-phenyl ether	101-55-3	<	2.0	0.20	ug/L	U	2.0	U

*Analysis Method*      *SW8270D*

4-Chloro-3-methylphenol	59-50-7	<	5.1	0.81	ug/L	U	5.1	U
4-Chloroaniline	106-47-8	<	1.0	0.12	ug/L	U	1.0	U
4-Chlorophenyl-phenyl ether	7005-72-3	<	1.0	0.18	ug/L	U	1.0	U
4-Nitroaniline	100-01-6	<	1.0	0.15	ug/L	U	1.0	U
4-Nitrophenol	100-02-7	<	10	1.1	ug/L	U	10	U
Acenaphthene	83-32-9	0.91	1.0	0.18	ug/L	J	0.91	J
Acenaphthylene	208-96-8	2.8	1.0	0.17	ug/L		2.8	
Acetophenone	98-86-2	17	1.0	0.27	ug/L		17	
Anthracene	120-12-7	0.97	1.0	0.11	ug/L	J	0.97	J
Atrazine	1912-24-9	<	1.0	0.26	ug/L	U	1.0	U
Benzaldehyde	100-52-7	<	1.0	0.25	ug/L	U	1.0	U
Benzo(a)anthracene	56-55-3	0.52	1.0	0.12	ug/L	J	0.52	J
Benzo(a)pyrene	50-32-8	0.32	1.0	0.14	ug/L	J	0.32	J
Benzo(b)fluoranthene	205-99-2	0.49	1.0	0.17	ug/L	J	0.49	J
Benzo(g,h,i)perylene	191-24-2	0.38	1.0	0.21	ug/L	J	0.38	J
Benzo(k)fluoranthene	207-08-9	<	1.0	0.20	ug/L	U	1.0	U
Bis(2-chloroethoxy)methane	111-91-1	<	1.0	0.19	ug/L	U	1.0	U
Bis(2-chloroethyl)ether	111-44-4	<	1.0	0.21	ug/L	U	1.0	U
Bis(2-chloroisopropyl)ether	108-60-1	<	1.0	0.22	ug/L	U	1.0	U
Bis(2-ethylhexyl)phthalate	117-81-7	1.0	2.0	0.44	ug/L	J	1.0	J
Butylbenzylphthalate	85-68-7	<	2.0	0.47	ug/L	U	2.0	U
Caprolactam	105-60-2	<	2.0	0.19	ug/L	U	2.0	U
Carbazole	86-74-8	<	1.0	0.12	ug/L	U	1.0	U
Chrysene	218-01-9	0.75	1.0	0.16	ug/L	J	0.75	J
Dibenzo(a,h)anthracene	53-70-3	<	1.0	0.17	ug/L	U	1.0	U
Dibenzofuran	132-64-9	0.33	1.0	0.19	ug/L	J	0.33	J
Diethylphthalate	84-66-2	<	2.0	0.45	ug/L	U	2.0	U
Dimethylphthalate	131-11-3	<	2.0	0.55	ug/L	U	2.0	U
Di-n-butylphthalate	84-74-2	<	4.0	0.68	ug/L	U	4.0	U
Di-n-octylphthalate	117-84-0	<	2.0	0.49	ug/L	U	2.0	U
Fluoranthene	206-44-0	1.1	1.0	0.13	ug/L		1.1	
Fluorene	86-73-7	2.1	1.0	0.19	ug/L		2.1	
Hexachlorobenzene	118-74-1	<	1.0	0.27	ug/L	U	1.0	U
Hexachlorobutadiene	87-68-3	<	1.0	0.18	ug/L	U	1.0	U
Hexachlorocyclopentadiene	77-47-4	<	2.0	0.26	ug/L	U	2.0	U
Hexachloroethane	67-72-1	<	1.0	0.22	ug/L	U	1.0	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.18	1.0	0.18	ug/L	J	0.18	J
Isophorone	78-59-1	<	1.0	0.18	ug/L	U	1.0	U
Naphthalene	91-20-3	11	1.0	0.18	ug/L		11	
Nitrobenzene	98-95-3	<	1.0	0.16	ug/L	U	1.0	U
N-Nitroso-di-n-propylamine	621-64-7	<	1.0	0.18	ug/L	U	1.0	U
N-Nitrosodiphenylamine & Diphen	86-30-6/122-39-4	2.5	2.0	0.36	ug/L		2.5	

*Analysis Method*    *SW8270D*

Pentachlorophenol	87-86-5	<	5.1	1.1	ug/L	U	5.1	<b>U</b>
Phenanthrene	85-01-8	3.3	1.0	0.30	ug/L		3.3	
Phenol	108-95-2	1.6	5.1	0.48	ug/L	J	1.6	<b>J</b>
Pyrene	129-00-0	1.4	1.0	0.13	ug/L		1.4	



June 20, 2016

Mr. Jaime Brown  
On-Scene Coordinator  
U.S. Environmental Protection Agency Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

**Subject:**      **Data Validation Report – Analytical Report 16051170**  
**Ford Heights Tire Fire**  
**EPA Contract No. EP-S5-13-01**  
**Technical Direction Document No. S05-0001-1605-016**  
**Document Tracking No. 0868**

Dear Mr. Brown:

Tetra Tech Inc. (Tetra Tech) is submitting this Data Validation Report for one surface water sample collected at the Ford Heights Tire Fire site. The sample was collected on May 25, 2016, and was analyzed for volatile organic compounds, semivolatile organic compounds, gasoline range organics, diesel range organics, extractable range organics, and metals by the STAT Analysis Corporation. The laboratory data package was received on June 1, 2016.

Analytical data were evaluated in general accordance with the *EPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014) and the *EPA NFG for Inorganic Superfund Data Review* (August 2014).

No data were rejected based on this validation. The results may be used as qualified.

If you have any questions regarding this data validation report, please call me at (662) 681-5727.

Sincerely,

A handwritten signature in black ink that reads "Jessica A. Dickens".

START Chemist

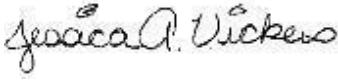
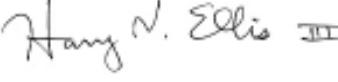
Enclosure

cc:      Kevin Scott, Tetra Tech Program Manager  
          Matt Villicana, Tetra Tech Project Manager  
          TDD File

**ATTACHMENT 1**

**LABORATORY REPORT 16051170**

**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

<b>Site Name</b>	Ford Heights Tire Fire	<b>TDD No.</b>	S05-0001-1605-016
<b>Document Tracking No.</b>	0868		
<b>Data Reviewer (signature and date)</b>	 June 9, 2016	<b>Technical Reviewer (signature and date)</b>	 20 June 2016
<b>Laboratory Report No.</b>	16051170	<b>Laboratory</b>	STAT Analysis Corp./Chicago, Illinois
<b>Analyses</b>	Volatile organic compounds (VOCs) and gasoline range organics (GRO) by SW-846 Method 8260B; semivolatile organic compounds (SVOCs) by SW-846 Method 8270C and 8270C with selected ion monitoring (SIM); diesel range organics (DRO) and extractable range organics (ERO) by SW-846 Method 8015M; and metals by SW-846 Methods 6020 and 7470A		
<b>Samples and Matrix</b>	One surface water sample		
<b>Field Duplicate Pairs</b>	None		
<b>Field Blanks</b>	None		

## INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (August 2014) and the EPA *NFG for Inorganic Superfund Data Review* (August 2014).

## OVERALL EVALUATION

No data were rejected based on this validation. The results may be used as qualified.

### Data completeness:

Within Criteria	Exceedance/Notes
Y	Summary report, as requested.

### Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Method blanks:**

Within Criteria	Exceedance/Notes
N	<p>VBLK050116-7: Acetone was detected at 0.00372 milligrams per liter (mg/L) and methylene chloride was detected at 0.00035 mg/L. No qualifications were required because the acetone result was greater than ten times the blank value and the methylene chloride result was not detected.</p> <p>MB-92532: Fluoranthene was detected at 0.00003 mg/L, fluorene was detected at 0.00005 mg/L, and phenanthrene was detected at 0.00015 mg/L. No qualifications were required because the associated analytes were not detected.</p> <p>IMBW2: Chromium was detected at 0.00055 mg/L and silver was detected at 0.0015 mg/L. No qualifications were required because the associated analytes were not detected.</p>

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**System monitoring compounds (surrogates and labeled compounds):**

Within Criteria	Exceedance/Notes
N	Recoveries were above the control limits for the undiluted SVOC analysis for 2-chlorophenol-d <sub>4</sub> and nitrobenzene-d <sub>5</sub> , as well as for nitrobenzene-d <sub>5</sub> for the SVOC SIM analysis. The naphthalene result was qualified as estimated with a possible high bias (J+). No further qualifications were required because the associated analytes were not detected.

**MS/MSD:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Field duplicates:**

Within Criteria	Exceedance/Notes
NA	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
Y	

**Sample dilutions:**

Within Criteria	Exceedance/Notes
Y	The sample required a 10-fold dilution for acetone, benzene, 4-methyl-2-pentanone, benzyl alcohol, pyridine, and DRO; a 100-fold dilution for aniline, 2,4-dimethylphenol, 2-methylphenol, 4-methylphenol, and phenol; a 5,000-fold dilution for benzoic acid; and a 2-fold dilution for arsenic, barium, cadmium, chromium, lead, selenium, and silver.

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Note "Sample Dilutions" above. Non-detects were reported with elevated reporting limits.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	



**DATA VALIDATION CHECKLIST – STAGE 2A**  
**EPA REGION 5 START CONTRACT**

**Other [specify]:**

Within Criteria	Exceedance/Notes
NA	

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.



## -Analysis Corporation

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*Accreditations: JEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-00*

**Date Reported:** June 01, 2016  
**Date Printed:** June 01, 2016

## ANALYTICAL RESULTS

**Client:** Tetra Tech EM Inc.  
**Work Order:** 16051170 Revision 0  
**Project:** 103X90260001 505160501  
Lab ID: 16051170-001

**Client Sample ID:** FHTF-SW-002-052616

**Collection Date:** 5/26 /2016 I :00:00 PM

**Matrix:** Aqueous

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	c!fQB (SW5030B)					
Acetone	0.20			mg/L	10	6/1/2016
Benzene	0.005			mg/L	10	6/1/2016
Bromodichloromethane				mg/L		6/1/2016
Bromoform	0.0050	U		mg/L		6/1/2016
Bromomethane	ND	0.0050		mg/L		6/1/2016
2-Butanone	ND	0.010	IJ	mg/L	1	6/1/2016
Carbon disulfide	ND	0.0050		mg/L		6/1/2016
Carbon tetrachloride	ND	0.0050		mg/L		6/1/2016
Chlorobenzene	ND	0.0050		mg/L	1	6/1/2016
Chloroethane	ND	0.010		mg/L	1	6/1/2016
Chloroform	ND	0.0050		mg/L	1	6/1/2016
Chloromethane	ND	0.010		mg/L		6/1/2016
Dibromochloromethane	ND	0.0050		mg/L		6/1/2016
1,1-Dichloroethane	ND	0.0050		mg/L		6/1/2016
1,2-Dichloroethane	ND	0.0050		mg/L		6/1/2016
1,1-Dichloroethene	ND	0.0050		mg/L		6/1/2016
cis-1,2-Dichloroethene	ND	0.0050		mg/L	1	6/1/2016
trans-1,2-Dichloroethene	ND	0.0050		mg/L	1	6/1/2016
1,2-Dichloropropane	ND	0.0050		mg/L		6/1/2016
cis-1,3-Dichloropropene	ND	0.0010		mg/L		6/1/2016
trans-1,3-Dichloropropene	ND	0.0010		mg/L	1	6/1/2016
Ethylbenzene				mg/L	1	6/1/2016
2-Hexanone				mg/L	1	6/1/2016
4-Methyl-2-pentanone				mg/L	10	6/1/2016
Methylene chloride	ND			mg/L		6/1/2016
Methyl tert-butyl ether	ND			mg/L		6/1/2016
Styrene	ND			mg/L		6/1/2016
1,1,2,2-Tetrachloroethane	ND			mg/L	1	6/1/2016
Tetrachloroethene	ND			mg/L	1	6/1/2016
Toluene				mg/L		6/1/2016
1,1,1-Trichloroethane	ND			mg/L		6/1/2016
1,1,2-Trichloroethane	ND	.0.0050 1,		mg/L	1	6/1/2016
Trichloroethene	ND	0.0050		mg/L	1	6/1/2016
Vinyl chloride		0.0020		mg/L	1	6/1/2016
Xylenes, Total		0.15		mg/L		6/1/2016
Total Petroleum Hydrocarbons (GRO) by GCMS	2608					
Gasoline Range Organics	1.9	0.50	*	mg/L	1	
						Analyst: PS
						6/1/2016

## Total Petroleum Hydrocarbons (GRO) by GCMS

### Cocaine, Benzene Organics

2608

Prep Date:

Analyst: PS

## Gasoline Range Organics

RL - Reponing / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R- RPD outside accepted recovery limits

E- Value above quantitation range

#### **Qualifications:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B-Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

H - Holding time exceeded

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# -Analysis Corporation

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

Client: Tetra Tech EM Inc.

Client Sample ID: FHTF-SW-002-052616

Work Order: 16051170 Revision 0

Collection Date: 5/26/2016 1:00:00 PM

Project: 103X90260001 5051605016, Ford Heights Tire Fir

Matrix: Aqueous

Lab ID: 16051170-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS SW8270C (SW3510C)</b>						
Aniline	(@)	0.50		mg/L	100	5/31/2016
Benzidine	/33\ -	25		mg/L		5/31/2016
Benzoic acid		0.0 -		mg/L	5000	6/1/2016
Benzyl alcohol	ND	.0050 L		mg/L	10	5/31/2016
Bis(2-chloroethoxy)methane	ND	0.0050		mg/L		5/31/2016
Bis(2-chloroethyl)ether	ND	0.0050		mg/L		5/31/2016
Bis(2-ethylhexyl)phthalate	ND	0.0050		mg/L		5/31/2016
4-Bromophenyl phenyl ether	ND	0.0050		mg/L		5/31/2016
Butyl benzyl phthalate	ND	0.0050		mg/L		5/31/2016
4-Chloroaniline	ND	0.0050		mg/L		5/31/2016
4-Chloro-3-methylphenol	ND	0.0050		mg/L		5/31/2016
2-Chloronaphthalene	ND	0.0050		mg/L		5/31/2016
2-Chlorophenol	ND	0.0050		mg/L		5/31/2016
4-Chlorophenyl phenyl ether	ND	0.0050		mg/L		5/31/2016
Dibenzofuran	ND	0.0050		mg/L		5/31/2016
1,2-Dichlorobenzene	ND	0.0050		mg/L		5/31/2016
1,3-Dichlorobenzene	ND	0.0050		mg/L		5/31/2016
1,4-Dichlorobenzene	ND	0.0050		mg/L		5/31/2016
3,3'-Dichlorobenzidine	ND	0.010		mg/L		5/31/2016
2,4-Dichlorophenol	ND	0.0050		mg/L		5/31/2016
Diethyl phthalate	ND	0.0050	V	mg/L		5/31/2016
2,4-Dimethylphenol		0.050		mg/L	100	5/31/2016
Dimethyl phthalate		0.0050 U		mg/L	1	5/31/2016
4,6-Dinitro-2-methylphenol	ND	0.025		mg/L		5/31/2016
2,4-Dinitrophenol	ND	0.025		mg/L		5/31/2016
Di-n-butyl phthalate	ND	0.0050		mg/L		5/31/2016
Di-n-octyl phthalate	ND	0.0050		mg/L		5/31/2016
Hexachlorobenzene	ND	0.0050		mg/L		5/31/2016
Hexachlorobutadiene	ND	0.0050		mg/L		5/31/2016
Hexachlorocyclopentadiene	ND	0.0050		mg/L		5/31/2016
Hexachloroethane	ND	0.0050		mg/L		5/31/2016
Isophorone	ND	0.0050		mg/L		5/31/2016
2-Methylnaphthalene	ND	0.0050		mg/L	1	5/31/2016
2-Methylphenol	0.99	0.50		mg/L	100	5/31/2016
4-Methylphenol	0.61	0.50		mg/L	100	5/31/2016
2-Nitroaniline	ND	0.025 L		mg/L		5/31/2016
3-Nitroaniline	ND	0.025 T		mg/L		5/31/2016
4-Nitroaniline	ND	0.025,-V		mg/L		5/31/2016

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

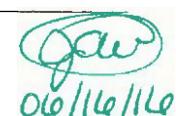
R - RPO outside accepted recovery limits

Hf - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

  
John W.  
06/16/16

# -Analysis Corporation

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**Date Reported:** June 01, 2016  
**Date Printed:** June 01, 2016

## ANALYTICAL RESULTS

<b>Client:</b>	Tetra Tech EM Inc.	<b>Client Sample ID:</b>	FHTF-SW-002-052616
<b>Work Order:</b>	16051170 Revision 0	<b>Collection Date:</b>	5/26/2016 1:00:00 PM
<b>Project:</b>	103X90260001 5051605016, Ford Heights Tire Fir	<b>Matrix:</b>	Aqueous
<b>Lab ID:</b>	16051170-001		

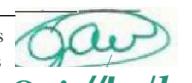
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
2-Nitrophenol	ND	0.0050	U	mg/L	1	5/31/2016
4-Nitrophenol	ND	0.025	U	mg/L	1	5/31/2016
N-Nitrosodimethylamine	ND	0.0050	U	mg/L		5/31/2016
N-Nitrosodiphenylamine	ND	0.0050	U	mg/L		5/31/2016
2, 2'-oxybis(1-Chloropropane)	0.0050			mg/L	1	5/31/2016
Phenol	0.50			mg/L	100	5/31/2016
Pyridine	0.050			mg/L	10	5/31/2016
1,2,4-Trichlorobenzene	ND	0.0050	U	mg/L	1	5/31/2016
2,4,5-Trichlorophenol	ND	0.010	U	mg/L	1	5/31/2016
2,4,6-Trichlorophenol	ND	0.0050	U	mg/L	1	5/31/2016
<b>Semivolatile Organic Compounds by GC/MS</b>						
Acenaphthene	ND	0.0010	U	mg/L	1	5/31/2016
Acenaphthylene	ND	0.0010	U	mg/L		5/31/2016
Anthracene	ND	0.0010	U	ng/L		5/31/2016
Benz(a)anthracene	ND	0.00010	U	mg/L		5/31/2016
Benzo(a)pyrene	ND	0.00010	U	mg/L		5/31/2016
Benzo(b)fluoranthene	ND	0.00010	U	mg/L	1	5/31/2016
Benzo(g,h,i)perylene	ND	0.0010	U	mg/L		5/31/2016
Benzo(k)fluoranthene	ND	0.00010	U	mg/L	1	5/31/2016
Chrysene	ND	0.00010	U	mg/L	1	5/31/2016
Dibenz(a,h)anthracene	ND	0.00010	U	mg/L	1	5/31/2016
Fluoranthene	ND	0.0010	U	mg/L	1	5/31/2016
Fluorene	ND	0.0010	U	mg/L		5/31/2016
Indeno(1,2,3-cd)pyrene	ND	0.00010	U	mg/L		5/31/2016
Naphthalene	0.0068	J+	0.0010	U	mg/L	5/31/2016
Phenanthrene	ND	0.0010	L	mg/L		5/31/2016
Pyrene	ND	0.0010	\	g/L		5/31/2016
Carbazole	ND	0.00010	U	mg/L		5/31/2016
2,4-Dinitrotoluene	ND	0.00011	1	mg/L		5/31/2016
2,6-Dinitrotoluene	ND	0.00010	U	mg/L		5/31/2016
N-Nitrosodi-n-propylamine	ND	0.00010	U	mg/L		5/31/2016
Nitrobenzene	ND	0.0010	U	mg/L		5/31/2016
Pentachlorophenol	ND	0.00050	U	mg/L		5/31/2016
<b>Total Petroleum Hydrocarbons in Water</b>						
TPH (ORO)	8.8		1.0	mg/L	10	Analyst: AOA
TPH (ERO)	0.15		0.10	mg/L		5/31/2016
						5/31/2016

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

H- Holding time exceeded

  
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# -Analysis Corporation

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Accreditations:IEPA ELAP 100445;ORELAP /L300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

Client:	Tetra Tech EM Inc.	Client Sample ID:	FHTF-SW-002-052616
Work Order:	16051 I 70 Revision 0	Collection Date:	5/26/2016 1:00:00 PM
Project:	103X90260001 5051605016, Ford Heights Tire Fir	Matrix:	Aqueous
Lab ID:	16051170-001		
Analyses	Result	RL Qualifier	Units
Metals by ICP/MS	C 1 f 1 J020 (SW3005A)		Prep Date: 5/31/2016 Analyst: JG
Arsenic	0.0040	mg/L	5/31/2016
Barium	0.004	mg/L	5/31/2016
Cadmium	ND	0.0020 U	mg/L
Chromium	ND	0.0040 U	mg/L
Lead	0.0038	0.0020	mg/L
Selenium	0.014	0.0040	mg/L
Silver	ND	0.0040 U	mg/L
Mercury	SW7470A		Prep Date: 5/31/2016 Analyst: LB
Mercury	ND	mg/L	5/31/2016

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Qualifiers:	ND - Not Detected at the Reporting Limit J - Analytic detected below quantitation limits B - Analyte detected in the associated Method Blank HT - Sample received past holding time * - Non-accredited parameter	RL - Reporting/Quantitation Limit for the analysis S - Spike Recovery outside accepted recovery limits R - RPO outside accepted recovery limits E - Value above quantitation range H - Holding time exceeded
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**ATTACHMENT 1**  
**EPA INITIAL POLREP**  
(4 Pages)

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Ford Heights Tire Fire - Removal Polrep  
Initial Removal Polrep**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V**

**Subject:** **POLREP #1**  
**Initial**  
**Ford Heights Tire Fire**

**Ford Heights, IL**  
**Latitude: 41.5024391 Longitude: -87.5968197**

**To:**  
**From:** Jaime Brown, OSC  
**Date:** 5/24/2016  
**Reporting Period:** 5/24/2016 - 5/25/2016

## **1. Introduction**

### **1.1 Background**

<b>Site Number:</b>	C5BS	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	PRP	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	5/24/2016	<b>Start Date:</b>	5/24/2016
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	Illinois EPA
<b>FPN#:</b>		<b>Reimbursable Account#:</b>	

#### **1.1.1 Incident Category**

Emergency Response

#### **1.1.2 Site Description**

The Site is a tire recycling operation owned/operated by two different entities. All American Recycling , Inc. GMI operates a recycling operation at the site and GMI Recycling operates a tire material storage facility . The piles of shredded tires which were involved in the fire are located at the GMI Recycling facility. The facility is surrounded by a financially distressed, predominantly low-income community.

#### **1.1.2.1 Location**

GMI Recycling Services (scrap tire collection operation) is located at 1703 Cottage Grove Avenue, Ford Heights, Illinois 60411.

All American Recycling (tire shred storage and recycling operation) is located at 1705 Cottage Grove Avenue, Ford Heights, Illinois 60411.

### **1.1.2.2 Description of Threat**

There are two primary threats from the incident. Contaminated run-off (containing oils from the burning tires) from firefighting operations threatens release to Deer Creek. Air emissions from the fire (smoke containing particulates and poly-aromatic hydrocarbons) threaten human health downwind of the site. Areas currently downwind of the site are primarily residential, with a middle school and several churches located within the area impacted by the smoke plume.

### **1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

A perimeter site walk was conducted upon arrival. A low-lying area leading to a culvert was receiving the majority of the contaminated run-off water from firefighting operations. Deer Creek runs east of the facility, though a low lying area, retention area, and culvert is currently restricting firefighting run-off from entering Deer Creek. A heavy smoke plume was visible for miles. The plume is impacting downwind receptors in a primarily residential area with several churches and a middle school.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

The fire was believed to be under control by the evening of May 24. However, the tire shred piles flared up periodically throughout the night of May 24 and into the morning of May 25. EPA is supporting the response through air monitoring/sampling and water quality monitoring. In addition, EPA provided technical assistance and temperature monitoring on tire shred piles throughout the night of May 24 to assist in the identification and extinguishing of hot spots remaining in the piles.

#### **2.1.2 Response Actions to Date**

5/24/16:

Water quality monitoring was conducted at 3 locations (upstream, source, and downstream) for impacts, with no adverse readings for Dissolved Oxygen or pH detected. Firefighting run-off was sampled directly using pH paper with no adverse readings detected. An air monitoring network utilizing AreaRAE monitors (O<sub>2</sub>, CO, H<sub>2</sub>S, VOC sensors) was established around the perimeter of the Site. Air sampling utilizing SUMMA canisters is being conducted for both 8 hour and 24 hour sampling periods. Air monitoring was also conducted near the smoldering tire shred piles utilizing an UltraRAE monitor for VOCs, particularly Benzene.

5/25/16:

Water quality monitoring was conducted at 2 locations (downstream and source) for impacts; no adverse reading for Dissolved Oxygen or pH were detected. Air monitoring was conducted around the perimeter of the Site utilizing AreaRAE monitors (O<sub>2</sub>, CO, H<sub>2</sub>S, VOC sensors) and DustTrak particulate monitors. Air sampling utilizing SUMMA canisters was continued for both 8 hour and 24 hours sampling periods. An additional air monitoring station was established to the North of the Site at the Ford Heights Middle School. Additional air monitoring was conducted near the smoldering tire pile shreds utilizing an UltraRAE monitor for VOCs. A thermal imaging camera was provided by the Illinois EPA to the Ford Heights Fire Department to assist with the location of hot spots remaining on the shredded tire pile.

#### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

The owners of both GMI Recycling Services and All American Recycling, which currently own & operate tire recycling collection & recycling services , respectively, at the Site, are assisting in response efforts.

#### **2.1.4 Progress Metrics**

<b>Waste Stream</b>	<b>Medium</b>	<b>Quantity</b>	<b>Manifest#</b>	<b>Treatment</b>	<b>Disposal</b>
NA					



## 2.2 Planning Section

### 2.2.1 Anticipated Activities

EPA/START will remain on site providing air monitoring/sampling and water quality monitoring in support of response operations. SUMMA canister samples will be sent for laboratory analysis.

#### 2.2.1.1 Planned Response Activities

EPA/START will continue air monitoring and water quality monitoring activities .

Ford Heights Fire Department (FHFD) will provide 24 hour surveillance of tire fire and address any hot spots/flare-ups.

#### 2.2.1.2 Next Steps

FHFD will identify necessary resources to break tire piles and extinguish the fires in the piles.

When the fire is completely extinguished, EPA will transition oversight of cleanup operations to Illinois EPA.

GMI will identify and contract with an environmental company to characterize and dispose of run-off water from fire suppression.

### 2.2.2 Issues

There are continuing flare-ups in the tire shred piles on the Site.

Identifying and mobilizing necessary resources.

## 2.3 Logistics Section

NA

## 2.4 Finance Section

### 2.4.1 Narrative

The response is being handled under CERCLA authority, as the primary threat to human health and the environment at this time is from air emissions (smoke) from the fire.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

OSC Brown is serving in this role.

### 2.5.2 Liaison Officer

OSC Brown is serving in this role.

### 2.5.3 Information Officer

OSC Brown is serving in this role.

## 3. Participating Entities

### 3.1 Unified Command

NA

### 3.2 Cooperating Agencies

Ford Heights Fire Department

Illinois EPA

Cook County EMA

Metropolitan Water Reclamation District

Mutual Aid Box Alarm System 27

#### **4. Personnel On Site**

FIRE SERVICE: 5

EPA: 2

Illinois EPA: 3

START: 2

TOTAL: 12

#### **5. Definition of Terms**

No information available at this time.

#### **6. Additional sources of information**

##### **6.1 Internet location of additional information/report**

<https://www.epaosc.org/fordheightstirefire>

##### **6.2 Reporting Schedule**

Next PolRep will be distributed on 5/26/16.

#### **7. Situational Reference Materials**

No information available at this time.

**ATTACHMENT 2**  
**ANALYTICAL REPORTS**  
(60 Pages)

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-01-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-001

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.25 Liter(s)  
 Test Notes:  
 Container ID: AC02077

Initial Pressure (psig): -0.04      Final Pressure (psig): 3.65

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	<b>280</b>	2.5	<b>160</b>	1.5	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	2.5	ND	0.51	
74-87-3	Chloromethane	ND	1.0	ND	0.48	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.5	ND	0.36	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	<b>37</b>	1.0	<b>17</b>	0.45	
74-83-9	Bromomethane	ND	1.0	ND	0.26	
75-00-3	Chloroethane	ND	1.0	ND	0.38	
64-17-5	Ethanol	<b>89</b>	25	<b>47</b>	13	
75-05-8	Acetonitrile	<b>10</b>	2.5	<b>5.9</b>	1.5	
107-02-8	Acrolein	ND	10	ND	4.4	
67-64-1	Acetone	<b>140</b>	25	<b>59</b>	11	
75-69-4	Trichlorofluoromethane	<b>1.2</b>	0.50	<b>0.21</b>	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	25	ND	10	
107-13-1	Acrylonitrile	ND	2.5	ND	1.2	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	2.5	ND	0.72	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	25	ND	8.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	25	ND	7.1	
78-93-3	2-Butanone (MEK)	<b>31</b>	25	<b>11</b>	8.5	

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Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - Sample      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

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156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	5.0	ND	1.4	
110-54-3	n-Hexane	21	2.5	6.1	0.71	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	2.5	ND	0.85	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	350	0.50	110	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	5.7	5.0	1.7	1.5	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	2.5	ND	0.69	
80-62-6	Methyl Methacrylate	ND	5.0	ND	1.2	
142-82-5	n-Heptane	19	2.5	4.7	0.61	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	ND	0.55	
108-10-1	4-Methyl-2-pentanone	34	2.5	8.3	0.61	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	ND	0.55	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	370	2.5	99	0.66	
591-78-6	2-Hexanone	2.9	2.5	0.70	0.61	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	2.5	ND	0.53	

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 P1602767\_TO15 - Sample      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

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 Container ID: AC02077

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Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	13	2.5	2.8	0.54	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	150	2.5	34	0.58	
179601-23-1	m,p-Xylenes	210	2.5	48	0.58	
75-25-2	Bromoform	ND	2.5	ND	0.24	
100-42-5	Styrene	68	2.5	16	0.59	
95-47-6	o-Xylene	45	2.5	10	0.58	
111-84-2	n-Nonane	8.3	2.5	1.6	0.48	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	25	2.5	5.0	0.51	
80-56-8	alpha-Pinene	ND	2.5	ND	0.45	
103-65-1	n-Propylbenzene	22	2.5	4.4	0.51	
622-96-8	4-Ethyltoluene	49	2.5	10	0.51	
108-67-8	1,3,5-Trimethylbenzene	11	2.5	2.3	0.51	
95-63-6	1,2,4-Trimethylbenzene	28	2.5	5.7	0.51	
100-44-7	Benzyl Chloride	ND	2.5	ND	0.48	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	300	2.5	54	0.45	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	ND	0.26	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	ND	0.34	
91-20-3	Naphthalene	13	2.5	2.5	0.48	
87-68-3	Hexachlorobutadiene	ND	2.5	ND	0.23	

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 TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** FHTF-AA-02-052516  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P1602767-002

Test Code: EPA TO-15 Date Collected: 5/25/16  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 5/31/16  
 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.040 Liter(s)  
 Test Notes:  
 Container ID: AC01649

Initial Pressure (psig): -2.57      Final Pressure (psig): 3.64

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	2,200	19	1,300	11	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	19	ND	3.8	
74-87-3	Chloromethane	ND	7.6	ND	3.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	19	ND	2.7	
75-01-4	Vinyl Chloride	ND	3.8	ND	1.5	
106-99-0	1,3-Butadiene	210	7.6	93	3.4	
74-83-9	Bromomethane	ND	7.6	ND	1.9	
75-00-3	Chloroethane	ND	7.6	ND	2.9	
64-17-5	Ethanol	ND	190	ND	100	
75-05-8	Acetonitrile	88	19	52	11	
107-02-8	Acrolein	ND	76	ND	33	
67-64-1	Acetone	360	190	150	79	
75-69-4	Trichlorofluoromethane	ND	3.8	ND	0.67	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	190	ND	77	
107-13-1	Acrylonitrile	ND	19	ND	8.7	
75-35-4	1,1-Dichloroethene	ND	3.8	ND	0.95	
75-09-2	Methylene Chloride	ND	19	ND	5.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.8	ND	1.2	
76-13-1	Trichlorotrifluoroethane	ND	3.8	ND	0.49	
75-15-0	Carbon Disulfide	ND	190	ND	61	
156-60-5	trans-1,2-Dichloroethene	ND	3.8	ND	0.95	
75-34-3	1,1-Dichloroethane	ND	3.8	ND	0.93	
1634-04-4	Methyl tert-Butyl Ether	ND	3.8	ND	1.0	
108-05-4	Vinyl Acetate	ND	190	ND	54	
78-93-3	2-Butanone (MEK)	ND	190	ND	64	

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 TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

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 Analyst: Lusine Hakobyan Date Analyzed: 6/2/16  
 Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.040 Liter(s)  
 Test Notes:  
 Container ID: AC01649

Initial Pressure (psig): -2.57      Final Pressure (psig): 3.64

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.8	ND	0.95	
141-78-6	Ethyl Acetate	ND	38	ND	10	
110-54-3	n-Hexane	<b>170</b>	19	<b>47</b>	5.4	
67-66-3	Chloroform	ND	3.8	ND	0.77	
109-99-9	Tetrahydrofuran (THF)	ND	19	ND	6.4	
107-06-2	1,2-Dichloroethane	ND	3.8	ND	0.93	
71-55-6	1,1,1-Trichloroethane	ND	3.8	ND	0.69	
71-43-2	Benzene	<b>2,600</b>	3.8	<b>810</b>	1.2	
56-23-5	Carbon Tetrachloride	ND	3.8	ND	0.60	
110-82-7	Cyclohexane	<b>39</b>	38	<b>11</b>	11	
78-87-5	1,2-Dichloropropane	ND	3.8	ND	0.82	
75-27-4	Bromodichloromethane	ND	3.8	ND	0.56	
79-01-6	Trichloroethene	ND	3.8	ND	0.70	
123-91-1	1,4-Dioxane	ND	19	ND	5.2	
80-62-6	Methyl Methacrylate	ND	38	ND	9.2	
142-82-5	n-Heptane	<b>150</b>	19	<b>35</b>	4.6	
10061-01-5	cis-1,3-Dichloropropene	ND	19	ND	4.2	
108-10-1	4-Methyl-2-pentanone	<b>230</b>	19	<b>57</b>	4.6	
10061-02-6	trans-1,3-Dichloropropene	ND	19	ND	4.2	
79-00-5	1,1,2-Trichloroethane	ND	3.8	ND	0.69	
108-88-3	Toluene	<b>3,000</b>	19	<b>790</b>	5.0	
591-78-6	2-Hexanone	<b>20</b>	19	<b>5.0</b>	4.6	
124-48-1	Dibromochloromethane	ND	3.8	ND	0.44	
106-93-4	1,2-Dibromoethane	ND	3.8	ND	0.49	
123-86-4	n-Butyl Acetate	ND	19	ND	4.0	

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Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - Sample (2)      TO15SCAN.XLS - 75 Compounds - Page No.: \_\_\_\_\_

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## RESULTS OF ANALYSIS

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111-65-9	n-Octane	100	19	21	4.0	
127-18-4	Tetrachloroethene	ND	3.8	ND	0.56	
108-90-7	Chlorobenzene	ND	3.8	ND	0.82	
100-41-4	Ethylbenzene	1,400	19	320	4.3	
179601-23-1	m,p-Xylenes	2,000	19	460	4.3	
75-25-2	Bromoform	ND	19	ND	1.8	
100-42-5	Styrene	480	19	110	4.4	
95-47-6	o-Xylene	440	19	100	4.3	
111-84-2	n-Nonane	70	19	13	3.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	ND	0.55	
98-82-8	Cumene	250	19	51	3.8	
80-56-8	alpha-Pinene	ND	19	ND	3.4	
103-65-1	n-Propylbenzene	220	19	45	3.8	
622-96-8	4-Ethyltoluene	580	19	120	3.8	
108-67-8	1,3,5-Trimethylbenzene	140	19	29	3.8	
95-63-6	1,2,4-Trimethylbenzene	350	19	70	3.8	
100-44-7	Benzyl Chloride	ND	19	ND	3.6	
541-73-1	1,3-Dichlorobenzene	ND	3.8	ND	0.63	
106-46-7	1,4-Dichlorobenzene	ND	3.8	ND	0.63	
95-50-1	1,2-Dichlorobenzene	ND	3.8	ND	0.63	
5989-27-5	d-Limonene	2,600	19	470	3.4	
96-12-8	1,2-Dibromo-3-chloropropane	ND	19	ND	2.0	
120-82-1	1,2,4-Trichlorobenzene	ND	19	ND	2.5	
91-20-3	Naphthalene	210	19	40	3.6	
87-68-3	Hexachlorobutadiene	ND	19	ND	1.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Method Blank  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-MB

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16	Date Received:	NA
Analyst:	Lusine Hakobyan	Date Analyzed:	6/1/16
Sample Type:	6.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.20	ND	0.097	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.10	ND	0.039	
106-99-0	1,3-Butadiene	ND	0.20	ND	0.090	
74-83-9	Bromomethane	ND	0.20	ND	0.052	
75-00-3	Chloroethane	ND	0.20	ND	0.076	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.10	ND	0.018	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.10	ND	0.025	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	ND	0.032	
76-13-1	Trichlorotrifluoroethane	ND	0.10	ND	0.013	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	ND	0.025	
75-34-3	1,1-Dichloroethane	ND	0.10	ND	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	ND	0.028	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - MBlank TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Method Blank  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Lusine Hakobyan  
 Sample Type: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 6/1/16  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.10	ND	0.025	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.10	ND	0.020	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.10	ND	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.10	ND	0.018	
71-43-2	Benzene	ND	0.10	ND	0.031	
56-23-5	Carbon Tetrachloride	ND	0.10	ND	0.016	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.10	ND	0.022	
75-27-4	Bromodichloromethane	ND	0.10	ND	0.015	
79-01-6	Trichloroethene	ND	0.10	ND	0.019	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.10	ND	0.012	
106-93-4	1,2-Dibromoethane	ND	0.10	ND	0.013	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - MBlank TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Method Blank  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Lusine Hakobyan  
 Sample Type: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 6/1/16  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	0.50	ND	0.12	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.015	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.10	ND	0.017	
106-46-7	1,4-Dichlorobenzene	ND	0.10	ND	0.017	
95-50-1	1,2-Dichlorobenzene	ND	0.10	ND	0.017	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 TO15SCAN.XLS - 75 Compounds - PageNo.:

**ALS ENVIRONMENTAL**

## SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Tetra Tech, Inc.  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
Analyst: Lusine Hakobyan  
Sample Type: 6.0 L Summa Canister(s)  
Test Notes:

Date(s) Collected: 5/25/16  
Date(s) Received: 5/31/16  
Date(s) Analyzed: 6/1 - 6/2/16

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene		Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered	Acceptance Limits	
Method Blank	P160601-MB	97	101	103	70-130	
Lab Control Sample	P160601-LCS	95	100	104	70-130	
FHTF-AA-01-052516	P1602767-001	97	94	96	70-130	
FHTF-AA-02-052516	P1602767-002	96	94	96	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
P1602767\_TO15 - Surrogates TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-LCS

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16	Date Received:	NA
Analyst:	Lusine Hakobyan	Date Analyzed:	6/1/16
Sample Type:	6.0 L Summa Canister	Volume(s) Analyzed:	0.125 Liter(s)
Test Notes:			

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	196	236	120	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	172	91	65-117	
74-87-3	Chloromethane	200	173	87	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	184	90	65-122	
75-01-4	Vinyl Chloride	200	198	99	65-128	
106-99-0	1,3-Butadiene	206	237	115	62-143	
74-83-9	Bromomethane	202	221	109	65-130	
75-00-3	Chloroethane	200	218	109	69-126	
64-17-5	Ethanol	998	1010	101	57-126	
75-05-8	Acetonitrile	212	213	100	51-134	
107-02-8	Acrolein	214	213	100	55-146	
67-64-1	Acetone	1,080	1050	97	57-120	
75-69-4	Trichlorofluoromethane	216	179	83	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	409	98	59-129	
107-13-1	Acrylonitrile	212	214	101	64-136	
75-35-4	1,1-Dichloroethene	216	214	99	72-123	
75-09-2	Methylene Chloride	222	205	92	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	204	94	50-141	
76-13-1	Trichlorotrifluoroethane	220	197	90	68-118	
75-15-0	Carbon Disulfide	210	181	86	55-143	
156-60-5	trans-1,2-Dichloroethene	210	213	101	69-129	
75-34-3	1,1-Dichloroethane	212	203	96	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	200	93	55-128	
108-05-4	Vinyl Acetate	1,040	1010	97	66-140	
78-93-3	2-Butanone (MEK)	220	220	100	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result. Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - LCS      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-LCS

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16	Date Received:	NA
Analyst:	Lusine Hakobyan	Date Analyzed:	6/1/16
Sample Type:	6.0 L Summa Canister	Volume(s) Analyzed:	0.125 Liter(s)
Test Notes:			

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	218	<b>218</b>	<b>100</b>	65-125	
141-78-6	Ethyl Acetate	428	<b>441</b>	<b>103</b>	64-132	
110-54-3	n-Hexane	212	<b>205</b>	<b>97</b>	58-126	
67-66-3	Chloroform	224	<b>202</b>	<b>90</b>	68-117	
109-99-9	Tetrahydrofuran (THF)	220	<b>223</b>	<b>101</b>	64-123	
107-06-2	1,2-Dichloroethane	214	<b>199</b>	<b>93</b>	63-124	
71-55-6	1,1,1-Trichloroethane	210	<b>196</b>	<b>93</b>	68-120	
71-43-2	Benzene	226	<b>206</b>	<b>91</b>	61-110	
56-23-5	Carbon Tetrachloride	230	<b>213</b>	<b>93</b>	65-137	
110-82-7	Cyclohexane	424	<b>406</b>	<b>96</b>	68-122	
78-87-5	1,2-Dichloropropane	216	<b>218</b>	<b>101</b>	67-122	
75-27-4	Bromodichloromethane	218	<b>212</b>	<b>97</b>	71-124	
79-01-6	Trichloroethene	216	<b>197</b>	<b>91</b>	71-121	
123-91-1	1,4-Dioxane	210	<b>215</b>	<b>102</b>	67-122	
80-62-6	Methyl Methacrylate	422	<b>410</b>	<b>97</b>	76-130	
142-82-5	n-Heptane	216	<b>210</b>	<b>97</b>	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	<b>213</b>	<b>102</b>	73-131	
108-10-1	4-Methyl-2-pentanone	220	<b>221</b>	<b>100</b>	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	<b>219</b>	<b>104</b>	76-135	
79-00-5	1,1,2-Trichloroethane	216	<b>208</b>	<b>96</b>	73-121	
108-88-3	Toluene	218	<b>199</b>	<b>91</b>	67-117	
591-78-6	2-Hexanone	220	<b>222</b>	<b>101</b>	59-128	
124-48-1	Dibromochloromethane	220	<b>225</b>	<b>102</b>	73-132	
106-93-4	1,2-Dibromoethane	218	<b>218</b>	<b>100</b>	73-128	
123-86-4	n-Butyl Acetate	226	<b>227</b>	<b>100</b>	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.  
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - LCS      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** Tetra Tech, Inc.  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767  
 ALS Sample ID: P160601-LCS

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16	Date Received:	NA
Analyst:	Lusine Hakobyan	Date Analyzed:	6/1/16
Sample Type:	6.0 L Summa Canister	Volume(s) Analyzed:	0.125 Liter(s)
Test Notes:			

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	210	218	104	67-124	
127-18-4	Tetrachloroethene	202	196	97	65-126	
108-90-7	Chlorobenzene	220	210	95	68-120	
100-41-4	Ethylbenzene	218	206	94	69-123	
179601-23-1	m,p-Xylenes	428	398	93	67-125	
75-25-2	Bromoform	228	227	100	68-153	
100-42-5	Styrene	222	211	95	68-132	
95-47-6	o-Xylene	210	196	93	67-124	
111-84-2	n-Nonane	204	201	99	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	209	100	72-128	
98-82-8	Cumene	208	208	100	67-124	
80-56-8	alpha-Pinene	212	204	96	67-129	
103-65-1	n-Propylbenzene	204	194	95	67-125	
622-96-8	4-Ethyltoluene	214	199	93	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	194	91	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	203	93	62-134	
100-44-7	Benzyl Chloride	220	237	108	74-145	
541-73-1	1,3-Dichlorobenzene	228	217	95	63-133	
106-46-7	1,4-Dichlorobenzene	208	204	98	62-129	
95-50-1	1,2-Dichlorobenzene	220	214	97	62-134	
5989-27-5	d-Limonene	210	210	100	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	225	103	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	202	88	60-145	
91-20-3	Naphthalene	218	180	83	56-158	
87-68-3	Hexachlorobutadiene	230	194	84	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result. Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
 P1602767\_TO15 - LCS      TO15SCAN.XLS - 75 Compounds - PageNo.: \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Tetra Tech, Inc.  
**Client Project ID:** Ford Heights Tire Fire

ALS Project ID: P1602767

### Internal Standard Area and RT Summary

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTO CAN/Agilent 5975Cinert/6890N/MS16 Lab File ID: 06011601.D  
Analyst: Lusine Hakobyan Date Analyzed: 6/1/16  
Sample Type: 6.0 L Summa Canister(s) Time Analyzed: 16:21  
Test Notes:

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	232013	11.30	1196064	13.42	487900	17.72
<b>Upper Limit</b>	324818	11.63	1674490	13.75	683060	18.05
<b>Lower Limit</b>	139208	10.97	717638	13.09	292740	17.39

<b>Client Sample ID</b>						
01	Method Blank	219253	11.29	1160596	13.41	476755
02	Lab Control Sample	223152	11.30	1143984	13.42	466622
03	FHTF-AA-01-052516	209977	11.29	1079323	13.41	468326
04	FHTF-AA-02-052516	217167	11.29	1111290	13.41	477310
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

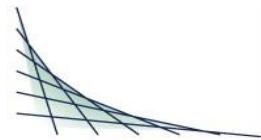
RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits.

Verified By: \_\_\_\_\_ Date: \_\_\_\_\_  
P1602767\_TO15 - ISS TO15SCAN.XLS - 75 Compounds - PageNo.:



## ***ANALYTICAL REPORT***

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

*This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.*





## ANALYTICAL REPORT

TETRA TECH  
CHRIS BURNS  
1 S WACKER DR  
37TH FLOOR  
CHICAGO, IL 60606

Project Name: FORD HEIGHTS TIRE FIRE  
Project Phase:  
Contract #: 2920  
Project #:  
Folder #: 119330

Page 1 of 6  
Arrival Temperature: 2.6  
Report Date: 06/10/2016  
Date Received: 05/27/2016  
Reprint Date: 06/10/2016

Purchase Order #: 1111200

CT LAB#: 729177	Sample Description:	FHTF-SW-001-052416	Client Sample #:						Sampled: 05/24/2016 0715		
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
<b>Organic Results</b>												
1,1,1-Trichloroethane	<0.21	ug/L	0.21	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.19	ug/L	0.19	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,1,2-Trichloroethane	<0.26	ug/L	0.26	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,1-Dichloroethane	<0.20	ug/L	0.20	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,1-Dichloroethene	<0.24	ug/L	0.24	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2,3-Trichlorobenzene	<0.30	ug/L	0.30	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2,4-Trichlorobenzene	<0.30	ug/L	0.30	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.40	ug/L	0.40	0.50	1.0	1.0	1.00	U Z,Q		6/1/16 15:17	AGK	EPA 8260C
1,2-Dibromoethane	<0.16	ug/L	0.16	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2-Dichlorobenzene	<0.23	ug/L	0.23	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2-Dichloroethane	0.58	ug/L	0.30	0.50	1.0	1.0	1.00	J		6/1/16 15:17	AGK	EPA 8260C
1,2-Dichloropropane	<0.22	ug/L	0.22	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,4-Dichloro-2-butene	<0.21	ug/L	0.21	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,4-Dioxane	<5.0	ug/L	5.0	13	25	25	1.00	U Z,Q		6/1/16 15:17	AGK	EPA 8260C
112Trichloro122trifluoroethane	<0.50	ug/L	0.50	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
2-Butanone	14	ug/L	2.4	2.5	5.0	5.0	1.00			6/1/16 15:17	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis



CT LAB#:	729177	Sample Description: FHTF-SW-001-052416		Client Sample #:					Sampled: 05/24/2016 0715			
Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Hexanone	<4.0	ug/L	4.0	5.0	10	10	1.00	U		6/1/16 15:17	AGK	EPA 8260C
4-Methyl-2-pentanone	12	ug/L	3.0	5.0	10	10	1.00			6/1/16 15:17	AGK	EPA 8260C
Acetone	38	ug/L	5.0	5.0	10	10	1.00			6/1/16 15:17	AGK	EPA 8260C
Benzene	23	ug/L	0.19	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C
Bromochloromethane	<0.19	ug/L	0.19	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Bromodichloromethane	<0.20	ug/L	0.20	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Bromoform	<0.22	ug/L	0.22	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Bromomethane	<0.50	ug/L	0.50	0.50	1.0	1.0	1.00	U Z		6/1/16 15:17	AGK	EPA 8260C
Carbon disulfide	<0.50	ug/L	0.50	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Carbon tetrachloride	<0.23	ug/L	0.23	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Chlorobenzene	<0.24	ug/L	0.24	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Chloroethane	<0.40	ug/L	0.40	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Chloroform	<0.15	ug/L	0.15	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Chloromethane	<0.40	ug/L	0.40	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
cis-1,2-Dichloroethene	<0.25	ug/L	0.25	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
cis-1,3-Dichloropropene	<0.19	ug/L	0.19	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Cyclohexane	<0.28	ug/L	0.28	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Dibromochloromethane	<0.19	ug/L	0.19	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Dichlorodifluoromethane	<0.26	ug/L	0.26	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Ethylbenzene	6.8	ug/L	0.22	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C
Isopropylbenzene	0.77	ug/L	0.18	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C
m & p-Xylene	15	ug/L	0.50	0.50	1.0	1.0	1.00			6/1/16 15:17	AGK	EPA 8260C
Methyl acetate	<0.30	ug/L	0.30	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Methyl tert-butyl ether	<0.29	ug/L	0.29	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Methylcyclohexane	<0.23	ug/L	0.23	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Methylene chloride	<0.40	ug/L	0.40	0.50	2.0	2.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
o-Xylene	4.1	ug/L	0.24	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C
Styrene	12	ug/L	0.20	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis



CT LAB#:	729177	Sample Description: FHTF-SW-001-052416		Client Sample #:					Sampled: 05/24/2016 0715			
Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Tetrachloroethene	<0.30	ug/L	0.30	0.50	1.0	1.0	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Toluene	22	ug/L	0.22	0.25	0.50	0.50	1.00			6/1/16 15:17	AGK	EPA 8260C
trans-1,2-Dichloroethene	<0.25	ug/L	0.25	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
trans-1,3-Dichloropropene	<0.19	ug/L	0.19	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Trichloroethene	<0.21	ug/L	0.21	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Trichlorofluoromethane	<0.20	ug/L	0.20	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
Vinyl chloride	<0.18	ug/L	0.18	0.25	0.50	0.50	1.00	U		6/1/16 15:17	AGK	EPA 8260C
1,2 Dichloroethane-d4	93	% Recovery	70			120	1.00			6/1/16 15:17	AGK	EPA 8260C
Bromofluorobenzene	100	% Recovery	75			120	1.00			6/1/16 15:17	AGK	EPA 8260C
d8-Toluene	103	% Recovery	85			120	1.00			6/1/16 15:17	AGK	EPA 8260C
Dibromofluoromethane	99	% Recovery	85			115	1.00			6/1/16 15:17	AGK	EPA 8260C
1,1'-Biphenyl	6.3	ug/L	0.15	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
1,2,4,5-Tetrachlorobenzene	<0.17	ug/L	0.17	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4,5-Trichlorophenol	<1.1	ug/L	1.1	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4,6-Trichlorophenol	<1.0	ug/L	1.0	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4-Dichlorophenol	<1.0	ug/L	1.0	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4-Dimethylphenol	7.1	ug/L	0.83	2.0	5.1	5.1	1.00		05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4-Dinitrophenol	<1.5	ug/L	1.5	5.1	10	10	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,4-Dinitrotoluene	<0.21	ug/L	0.21	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2,6-Dinitrotoluene	<0.28	ug/L	0.28	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Chloronaphthalene	<0.18	ug/L	0.18	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Chlorophenol	<0.88	ug/L	0.88	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Methylnaphthalene	4.6	ug/L	0.17	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Methylphenol	15	ug/L	0.87	2.0	5.1	5.1	1.00		05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Nitroaniline	<0.22	ug/L	0.22	0.40	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
2-Nitrophenol	<0.91	ug/L	0.91	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
3 & 4-Methylphenol	4.0	ug/L	1.4	3.6	9.1	9.1	1.00	J	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D
3,3'-Dichlorobenzidine	<0.67	ug/L	0.67	1.0	2.5	2.5	1.00	U	05/27/2016 15:00	6/1/16 21:36	RPN	EPA 8270D

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis



Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
3-Nitroaniline	<0.26	ug/L	0.26	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4,6-Dinitro-2-methylphenol	<1.6	ug/L	1.6	2.0	10	10	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Bromophenyl-phenyl ether	<0.20	ug/L	0.20	0.40	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Chloro-3-methylphenol	<0.81	ug/L	0.81	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Chloroaniline	<0.12	ug/L	0.12	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Chlorophenyl-phenyl ether	<0.18	ug/L	0.18	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Nitroaniline	<0.15	ug/L	0.15	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
4-Nitrophenol	<1.1	ug/L	1.1	5.1	10	10	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Acenaphthene	0.91	ug/L	0.18	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Acenaphthylene	2.8	ug/L	0.17	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Acetophenone	17	ug/L	0.27	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Anthracene	0.97	ug/L	0.11	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Atrazine	<0.26	ug/L	0.26	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	
Benzaldehyde	<0.25	ug/L	0.25	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	
Benzo(a)anthracene	0.52	ug/L	0.12	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Benzo(a)pyrene	0.32	ug/L	0.14	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Benzo(b)fluoranthene	0.49	ug/L	0.17	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Benzo(g,h,i)perylene	0.38	ug/L	0.21	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Benzo(k)fluoranthene	<0.20	ug/L	0.20	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Bis(2-chloroethoxy)methane	<0.19	ug/L	0.19	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Bis(2-chloroethyl)ether	<0.21	ug/L	0.21	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Bis(2-chloroisopropyl)ether	<0.22	ug/L	0.22	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Bis(2-ethylhexyl)phthalate	1.0	ug/L	0.44	1.0	2.0	2.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Butylbenzylphthalate	<0.47	ug/L	0.47	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Caprolactam	<0.19	ug/L	0.19	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	
Carbazole	<0.12	ug/L	0.12	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Chrysene	0.75	ug/L	0.16	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Di-n-butylphthalate	<0.68	ug/L	0.68	2.0	4.0	4.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis



CT LAB#:	729177	Sample Description:		FHTF-SW-001-052416	Client Sample #:				Sampled: 05/24/2016 0715			
Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Di-n-octylphthalate	<0.49	ug/L	0.49	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Dibenzo(a,h)anthracene	<0.17	ug/L	0.17	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Dibenzofuran	0.33	ug/L	0.19	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Diethylphthalate	<0.45	ug/L	0.45	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Dimethylphthalate	<0.55	ug/L	0.55	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Fluoranthene	1.1	ug/L	0.13	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Fluorene	2.1	ug/L	0.19	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Hexachlorobenzene	<0.27	ug/L	0.27	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Hexachlorobutadiene	<0.18	ug/L	0.18	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Hexachlorocyclopentadiene	<0.26	ug/L	0.26	1.0	2.0	2.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Hexachloroethane	<0.22	ug/L	0.22	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Indeno(1,2,3-cd)pyrene	0.18	ug/L	0.18	0.40	1.0	1.0	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Isophorone	<0.18	ug/L	0.18	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
N-Nitroso-di-n-propylamine	<0.18	ug/L	0.18	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
N-Nitrosodiphenylamine & Diphn	2.5	ug/L	0.36	0.81	2.0	2.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Naphthalene	11	ug/L	0.18	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Nitrobenzene	<0.16	ug/L	0.16	0.40	1.0	1.0	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Pentachlorophenol	<1.1	ug/L	1.1	2.0	5.1	5.1	1.00	U	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Phenanthrene	3.3	ug/L	0.30	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Phenol	1.6	ug/L	0.48	2.0	5.1	5.1	1.00	J	05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Pyrene	1.4	ug/L	0.13	0.40	1.0	1.0	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: 2,4,6-Tribromophenol	94	% Recovery	40			125	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: 2-Fluorobiphenyl	75	% Recovery	50			110	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: 2-Fluorophenol	35	% Recovery	20			110	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: Nitrobenzene-d5	77	% Recovery	40			110	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: Phenol-d5	25	% Recovery	10			115	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^
Surr: Terphenyl-d14	74	% Recovery	50			135	1.00		05/27/2016 15:00	6/1/16 21:36 RPN	EPA 8270D	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Brett M. Szymanski  
Project Manager  
608-356-2760

**This report has been specifically prepared to satisfy project or program requirements.** These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

QC Qualifiers	
<b>Code</b>	<b>Description</b>
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	BOD incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

#### Current CT Laboratories Certifications

Kansas NELAP ID# E-10368  
Kentucky ID# 0023  
ISO/IEC 17025-2005 A2LA Cert # 3806.01  
North Carolina ID# 674  
Wisconsin (WDNR) Chemistry ID# 157066030  
Wisconsin (DATCP) Bacteriology ID# 105-289  
DoD-ELAP A2LA 3806.01  
GA EPD Stipulation ID E871111, Expires Annually  
Louisiana ID # 115843  
Virginia ID# 7608  
Illinois NELAP ID # 002413  
Wisconsin (WOSB) ID# WI-5499-WBE  
Maryland ID# 344

## QC SUMMARY REPORT

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

### Lab Control Spike Water

Analytical Run #:	126547	Analysis Date:	06/01/2016 <th>Prep Batch #:</th> <td></td> <th>Matrix:</th> <td>LIQUID</td>	Prep Batch #:		Matrix:	LIQUID		
CTLab #:	730258	Analysis Time:	10:49	Prep Date/Time:		Method:	SW8260C		
Parent Sample #:		Analyst:	AGK	Prep Analyst:					
Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	10.6	ug/L			10.0	106	65 --- 130		
1,1,2,2-Tetrachloroethane	9.96	ug/L			10.0	100	65 --- 130		
1,1,2-Trichloroethane	10.3	ug/L			10.0	103	75 --- 125		
1,1-Dichloroethane	10.3	ug/L			10.0	103	70 --- 135		
1,1-Dichloroethene	10.2	ug/L			10.0	102	70 --- 130		
1,2,3-Trichlorobenzene	10.4	ug/L			10.0	104	55 --- 140		
1,2,4-Trichlorobenzene	10.3	ug/L			10.0	103	65 --- 135		
1,2-Dibromo-3-chloropropane	15.1	ug/L			10.0	151	50 --- 130		
1,2-Dibromoethane	10.1	ug/L			10.0	101	80 --- 120		
1,2-Dichlorobenzene	9.86	ug/L			10.0	99	70 --- 120		
1,2-Dichloroethane	10.4	ug/L			10.0	104	70 --- 130		
1,2-Dichloropropane	9.75	ug/L			10.0	98	75 --- 125		
1,3-Dichlorobenzene	10.1	ug/L			10.0	101	75 --- 125		
1,4-Dichloro-2-butene	8.07	ug/L			10.0	81	70 --- 130		
1,4-Dioxane	62.4	ug/L			500	12	70 --- 130		
112Trichloro122trifluoroethane	20.6	ug/L			20.0	103	70 --- 130		
2-Butanone	112	ug/L			100	112	30 --- 150		
2-Hexanone	105	ug/L			100	105	55 --- 130		
4-Methyl-2-pentanone	106	ug/L			100	106	60 --- 135		
Acetone	107	ug/L			100	107	40 --- 140		
Benzene	10.4	ug/L			10.0	104	80 --- 120		
Bromochloromethane	10.1	ug/L			10.0	101	65 --- 130		
Bromodichloromethane	10.2	ug/L			10.0	102	75 --- 120		
Bromoform	9.15	ug/L			10.0	92	70 --- 130		
Bromomethane	7.16	ug/L			10.0	72	30 --- 145		
Carbon disulfide	22.6	ug/L			20.0	113	35 --- 160		
Carbon tetrachloride	10.8	ug/L			10.0	108	65 --- 140		
Chlorobenzene	10.1	ug/L			10.0	101	80 --- 120		
Chloroethane	11.0	ug/L			10.0	110	60 --- 135		
Chloroform	10.3	ug/L			10.0	103	65 --- 135		
Chloromethane	10.5	ug/L			10.0	105	40 --- 125		
cis-1,2-Dichloroethene	9.59	ug/L			10.0	96	70 --- 125		
cis-1,3-Dichloropropene	10.6	ug/L			10.0	106	70 --- 130		
Cyclohexane	10.2	ug/L			10.0	102	70 --- 130		
Dibromochloromethane	9.60	ug/L			10.0	96	60 --- 135		

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Lab Control Spike Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	LIQUID		
CTLab #:	730258	Analysis Time:	10:49	Prep Date/Time:		Method:	SW8260C		
Parent Sample #:		Analyst:	AGK	Prep Analyst:					
<hr/>									
Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Dichlorodifluoromethane	10.8	ug/L			10.0	108	30 --- 155		
Ethylbenzene	10.9	ug/L			10.0	109	75 --- 125		
Isopropylbenzene	10.5	ug/L			10.0	105	75 --- 125		
m & p-Xylene	20.5	ug/L			20.0	102	75 --- 130		
Methyl acetate	10.8	ug/L			10.0	108	70 --- 130		
Methyl tert-butyl ether	10.5	ug/L			10.0	105	65 --- 125		
Methylcyclohexane	10.8	ug/L			10.0	108	70 --- 130		
Methylene chloride	11.3	ug/L			10.0	113	55 --- 140		
o-Xylene	10.0	ug/L			10.0	100	80 --- 120		
Styrene	10.2	ug/L			10.0	102	65 --- 135		
Tetrachloroethene	9.87	ug/L			10.0	99	45 --- 150		
Toluene	10.6	ug/L			10.0	106	75 --- 120		
trans-1,2-Dichloroethene	10.7	ug/L			10.0	107	60 --- 140		
trans-1,3-Dichloropropene	10.1	ug/L			10.0	101	55 --- 140		
Trichloroethene	10.5	ug/L			10.0	105	70 --- 125		
Trichlorofluoromethane	10.6	ug/L			10.0	106	60 --- 145		
Vinyl chloride	11.3	ug/L			10.0	113	50 --- 145		

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Method Blank Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	LIQUID
CTLab #:	730355	Analysis Time:	12:18	Prep Date/Time:		Method:	SW8260C
Parent Sample #:		Analyst:	AGK	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.21	ug/L		U	0		0.25		
1,1,2,2-Tetrachloroethane	0.19	ug/L		U	0		0.25		
1,1,2-Trichloroethane	0.26	ug/L		U	0		0.50		
1,1-Dichloroethane	0.20	ug/L		U	0		0.25		
1,1-Dichloroethene	0.24	ug/L		U	0		0.25		
1,2,3-Trichlorobenzene	0.3	ug/L		U	0		0.5		
1,2,4-Trichlorobenzene	0.3	ug/L		U	0		0.5		
1,2-Dibromo-3-chloropropane	0.4	ug/L		U	0		0.5		
1,2-Dibromoethane	0.16	ug/L		U	0		0.25		
1,2-Dichlorobenzene	0.23	ug/L		U	0		0.25		
1,2-Dichloroethane	0.3	ug/L		U	0		0.5		
1,2-Dichloropropane	0.22	ug/L		U	0		0.25		
1,3-Dichlorobenzene	0.26	ug/L		U	0		0.50		
1,4-Dichloro-2-butene	0.21	ug/L		U	0		0.25		
1,4-Dioxane	83.2	ug/L			0		12.5		
112Trichloro122trifluoroethane	0.5	ug/L		U	0		0.5		
2-Butanone	2.4	ug/L		U	0		2.5		
2-Hexanone	4	ug/L		U	0		5		
4-Methyl-2-pentanone	3	ug/L		U	0		5		
Acetone	5	ug/L		U	0		5		
Benzene	0.19	ug/L		U	0		0.25		
Bromochloromethane	0.19	ug/L		U	0		0.25		
Bromodichloromethane	0.20	ug/L		U	0		0.25		
Bromoform	0.22	ug/L		U	0		0.25		
Bromomethane	0.5	ug/L		U	0		0.5		
Carbon disulfide	0.5	ug/L		U	0		0.5		
Carbon tetrachloride	0.23	ug/L		U	0		0.25		
Chlorobenzene	0.24	ug/L		U	0		0.25		
Chloroethane	0.4	ug/L		U	0		0.5		
Chloroform	0.15	ug/L		U	0		0.25		
Chloromethane	0.4	ug/L		U	0		0.5		
cis-1,2-Dichloroethene	0.25	ug/L		U	0		0.25		
cis-1,3-Dichloropropene	0.19	ug/L		U	0		0.25		
Cyclohexane	0.28	ug/L		U	0		0.50		
Dibromochloromethane	0.19	ug/L		U	0		0.25		
Dichlorodifluoromethane	0.26	ug/L		U	0		0.50		
Ethylbenzene	0.22	ug/L		U	0		0.25		
Isopropylbenzene	0.18	ug/L		U	0		0.25		
m & p-Xylene	0.5	ug/L		U	0		0.5		
Methyl acetate	0.3	ug/L		U	0		0.5		
Methyl tert-butyl ether	0.29	ug/L		U	0		0.50		
Methylcyclohexane	0.23	ug/L		U	0		0.25		
Methylene chloride	0.4	ug/L		U	0		1.0		

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TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Method Blank Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	LIQUID		
CTLab #:	730355	Analysis Time:	12:18	Prep Date/Time:		Method:	SW8260C		
Parent Sample #:		Analyst:	AGK	Prep Analyst:					
<hr/>									
Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
o-Xylene	0.24	ug/L		U	0		0.25		
Styrene	0.20	ug/L		U	0		0.25		
Tetrachloroethene	0.3	ug/L		U	0		0.5		
Toluene	0.22	ug/L		U	0		0.25		
trans-1,2-Dichloroethene	0.25	ug/L		U	0		0.25		
trans-1,3-Dichloropropene	0.19	ug/L		U	0		0.25		
Trichloroethene	0.21	ug/L		U	0		0.25		
Trichlorofluoromethane	0.20	ug/L		U	0		0.25		
Vinyl chloride	0.18	ug/L		U	0		0.25		

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Matrix Spike Duplicate Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	730779	Analysis Time:	16:17	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	730769	Analyst:	AGK	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	11.9	ug/L	BDL		10.0	119	65 --- 130	0	30
1,1,2,2-Tetrachloroethane	10.0	ug/L	BDL		10.0	100	65 --- 130	6	30
1,1,2-Trichloroethane	10.1	ug/L	BDL		10.0	101	75 --- 125	0	30
1,1-Dichloroethane	10.3	ug/L	BDL		10.0	103	70 --- 135	3	30
1,1-Dichloroethene	9.95	ug/L	BDL		10.0	100	70 --- 130	5	30
1,2 Dichloroethane-d4	97.0	% Recovery			100	97.0	70 --- 120		
1,2,3-Trichlorobenzene	10.5	ug/L	BDL		10.0	105	55 --- 140	5	30
1,2,4-Trichlorobenzene	10.4	ug/L	BDL		10.0	104	65 --- 135	2	30
1,2-Dibromo-3-chloropropane	8.95	ug/L	BDL		10.0	90	50 --- 130	4	30
1,2-Dibromoethane	10.2	ug/L	BDL		10.0	102	80 --- 120	0	30
1,2-Dichlorobenzene	9.98	ug/L	BDL		10.0	100	70 --- 120	2	30
1,2-Dichloroethane	12.1	ug/L	0.58		10.0	115	70 --- 130	0	30
1,2-Dichloropropane	9.77	ug/L	BDL		10.0	98	75 --- 125	1	30
1,3-Dichlorobenzene	10.2	ug/L	BDL		10.0	102	75 --- 125	2	30
1,4-Dichloro-2-butene	8.44	ug/L	0.77		10.0	77	70 --- 130	3	30
1,4-Dioxane	635	ug/L	BDL		500	127	50 --- 143	4	30
112Trichloro122trifluoroethane	21.4	ug/L	BDL		20.0	107	70 --- 130	1	30
2-Butanone	111	ug/L	14		100	97	30 --- 150	8	30
2-Hexanone	94.7	ug/L	BDL		100	95	55 --- 130	2	30
4-Methyl-2-pentanone	114	ug/L	12		100	102	60 --- 135	2	30
Acetone	116	ug/L	38		100	78	40 --- 140	2	30
Benzene	32.8	ug/L	23		10.0	98	80 --- 120	2	30
Bromochloromethane	9.57	ug/L	BDL		10.0	96	65 --- 130	1	30
Bromodichloromethane	10.9	ug/L	BDL		10.0	109	75 --- 120	3	30
Bromofluorobenzene	98.0	% Recovery			100	98.0	75 --- 120		
Bromoform	9.11	ug/L	BDL		10.0	91	70 --- 130	7	30
Bromomethane	7.70	ug/L	BDL		10.0	77	30 --- 145	12	30
Carbon disulfide	20.8	ug/L	BDL		20.0	104	35 --- 160	2	30
Carbon tetrachloride	12.1	ug/L	BDL		10.0	121	65 --- 140	6	30
Chlorobenzene	10.6	ug/L	BDL		10.0	106	80 --- 120	1	30
Chloroethane	10.3	ug/L	BDL		10.0	103	60 --- 135	9	30
Chloroform	10.6	ug/L	BDL		10.0	106	65 --- 135	2	30
Chloromethane	8.87	ug/L	BDL		10.0	89	40 --- 125	8	30
cis-1,2-Dichloroethene	10.0	ug/L	BDL		10.0	100	70 --- 125	3	30
cis-1,3-Dichloropropene	10.7	ug/L	BDL		10.0	107	70 --- 130	2	30
Cyclohexane	10.5	ug/L	BDL		10.0	105	77 --- 129	5	30
d8-Toluene	103	% Recovery			100	103	85 --- 120		
Dibromochloromethane	9.96	ug/L	BDL		10.0	100	60 --- 135	6	30
Dibromofluoromethane	101	% Recovery			100	101	85 --- 115		
Dichlorodifluoromethane	9.51	ug/L	BDL		10.0	95	30 --- 155	2	30
Ethylbenzene	17.3	ug/L	6.8		10.0	105	75 --- 125	3	30
Isopropylbenzene	12.3	ug/L	0.77		10.0	115	75 --- 125	1	30
m & p-Xylene	35.6	ug/L	15		20.0	103	75 --- 130	3	30

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Matrix Spike Duplicate Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	GROUND WATER		
CTLab #:	730779	Analysis Time:	16:17	Prep Date/Time:		Method:	SW8260C		
Parent Sample #:	730769	Analyst:	AGK	Prep Analyst:					
Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Methyl acetate	9.55	ug/L	BDL		10.0	96	24 --- 174	2	30
Methyl tert-butyl ether	10.2	ug/L	BDL		10.0	102	65 --- 125	6	30
Methylcyclohexane	11.3	ug/L	BDL		10.0	113	76 --- 133	4	30
Methylene chloride	8.37	ug/L	BDL		10.0	84	55 --- 140	9	30
o-Xylene	14.2	ug/L	4.1		10.0	101	80 --- 120	3	30
Styrene	22.3	ug/L	12		10.0	103	65 --- 135	6	30
Tetrachloroethene	11.3	ug/L	BDL		10.0	113	45 --- 150	0	30
Toluene	32.5	ug/L	22		10.0	105	75 --- 120	2	30
trans-1,2-Dichloroethene	10.6	ug/L	BDL		10.0	106	60 --- 140	5	30
trans-1,3-Dichloropropene	11.1	ug/L	BDL		10.0	111	55 --- 140	0	30
Trichloroethene	11.1	ug/L	BDL		10.0	111	70 --- 125	0	30
Trichlorofluoromethane	11.5	ug/L	BDL		10.0	115	60 --- 145	1	30
Vinyl chloride	10.3	ug/L	BDL		10.0	103	50 --- 145	2	30

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Matrix Spike Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	730769	Analysis Time:	15:46	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	729177	Analyst:	AGK	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1,1-Trichloroethane	11.8	ug/L	BDL		10.0	118	65 --- 130	30	
1,1,2-Tetrachloroethane	9.38	ug/L	BDL		10.0	94	65 --- 130	30	
1,1,2-Trichloroethane	10.0	ug/L	BDL		10.0	100	75 --- 125	30	
1,1-Dichloroethane	10.0	ug/L	BDL		10.0	100	70 --- 135	30	
1,1-Dichloroethene	9.51	ug/L	BDL		10.0	95	70 --- 130	30	
1,2 Dichloroethane-d4	94.0	% Recovery			100	94.0	70 --- 120		
1,2,3-Trichlorobenzene	9.98	ug/L	BDL		10.0	100	55 --- 140	30	
1,2,4-Trichlorobenzene	10.6	ug/L	BDL		10.0	106	65 --- 135	30	
1,2-Dibromo-3-chloropropane	8.64	ug/L	BDL		10.0	86	50 --- 130	30	
1,2-Dibromoethane	10.2	ug/L	BDL		10.0	102	80 --- 120	30	
1,2-Dichlorobenzene	10.2	ug/L	BDL		10.0	102	70 --- 120	30	
1,2-Dichloroethane	12.1	ug/L	0.58		10.0	115	70 --- 130	30	
1,2-Dichloropropane	9.84	ug/L	BDL		10.0	98	75 --- 125	30	
1,3-Dichlorobenzene	10.4	ug/L	BDL		10.0	104	75 --- 125	30	
1,4-Dichloro-2-butene	8.70	ug/L	0.77		10.0	79	70 --- 130	30	
1,4-Dioxane	609	ug/L	BDL		500	122	50 --- 143	30	
112Trichloro122trifluoroethane	21.3	ug/L	BDL		20.0	106	70 --- 130	30	
2-Butanone	102	ug/L	14		100	88	30 --- 150	30	
2-Hexanone	96.7	ug/L	BDL		100	97	55 --- 130	30	
4-Methyl-2-pentanone	112	ug/L	12		100	100	60 --- 135	30	
Acetone	114	ug/L	38		100	76	40 --- 140	30	
Benzene	32.1	ug/L	23		10.0	91	80 --- 120	30	
Bromochloromethane	9.47	ug/L	BDL		10.0	95	65 --- 130	30	
Bromodichloromethane	10.6	ug/L	BDL		10.0	106	75 --- 120	30	
Bromofluorobenzene	98.0	% Recovery			100	98.0	75 --- 120		
Bromoform	9.81	ug/L	BDL		10.0	98	70 --- 130	30	
Bromomethane	8.66	ug/L	BDL		10.0	87	30 --- 145	30	
Carbon disulfide	21.3	ug/L	BDL		20.0	106	35 --- 160	30	
Carbon tetrachloride	11.3	ug/L	BDL		10.0	113	65 --- 140	30	
Chlorobenzene	10.7	ug/L	BDL		10.0	107	80 --- 120	30	
Chloroethane	9.42	ug/L	BDL		10.0	94	60 --- 135	30	
Chloroform	10.8	ug/L	BDL		10.0	108	65 --- 135	30	
Chloromethane	8.18	ug/L	BDL		10.0	82	40 --- 125	30	
cis-1,2-Dichloroethene	9.79	ug/L	BDL		10.0	98	70 --- 125	30	
cis-1,3-Dichloropropene	10.5	ug/L	BDL		10.0	105	70 --- 130	30	
Cyclohexane	9.97	ug/L	BDL		10.0	100	77 --- 129	30	
d8-Toluene	104	% Recovery			100	104	85 --- 120		
Dibromochloromethane	10.5	ug/L	BDL		10.0	105	60 --- 135	30	
Dibromofluoromethane	101	% Recovery			100	101	85 --- 115		
Dichlorodifluoromethane	9.31	ug/L	BDL		10.0	93	30 --- 155	30	
Ethylbenzene	17.9	ug/L	6.8		10.0	111	75 --- 125	30	
Isopropylbenzene	12.4	ug/L	0.77		10.0	116	75 --- 125	30	
m & p-Xylene	36.7	ug/L	15		20.0	108	75 --- 130	30	

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Matrix Spike Water***

Analytical Run #:	126547	Analysis Date:	06/01/2016	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	730769	Analysis Time:	15:46	Prep Date/Time:		Method:	SW8260C
Parent Sample #:	729177	Analyst:	AGK	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Methyl acetate	9.78	ug/L	BDL		10.0	98	24 --- 174	30	
Methyl tert-butyl ether	9.61	ug/L	BDL		10.0	96	65 --- 125	30	
Methylcyclohexane	10.9	ug/L	BDL		10.0	109	76 --- 133	30	
Methylene chloride	9.16	ug/L	BDL		10.0	92	55 --- 140	30	
o-Xylene	14.7	ug/L	4.1		10.0	106	80 --- 120	30	
Styrene	23.7	ug/L	12		10.0	117	65 --- 135	30	
Tetrachloroethene	11.2	ug/L	BDL		10.0	112	45 --- 150	30	
Toluene	31.9	ug/L	22		10.0	99	75 --- 120	30	
trans-1,2-Dichloroethene	11.1	ug/L	BDL		10.0	111	60 --- 140	30	
trans-1,3-Dichloropropene	11.1	ug/L	BDL		10.0	111	55 --- 140	30	
Trichloroethene	11.1	ug/L	BDL		10.0	111	70 --- 125	30	
Trichlorofluoromethane	11.4	ug/L	BDL		10.0	114	60 --- 145	30	
Vinyl chloride	10.1	ug/L	BDL		10.0	101	50 --- 145	30	

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

**Lab Control Spike Water**

Analytical Run #:	126625	Analysis Date:	06/01/2016	Prep Batch #:	57458	Matrix:	LIQUID
CTLab #:	728581	Analysis Time:	16:48	Prep Date/Time:	05/27/2016 15:00	Method:	SW8270
Parent Sample #:		Analyst:	RPN	Prep Analyst:	AJZ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1'-Biphenyl	16.3	ug/L			20.0	82	50 --- 150	30	
1,2,4,5-Tetrachlorobenzene	14.7	ug/L			20.0	74	40 --- 110	30	
2,4,5-Trichlorophenol	16.9	ug/L			20.0	84	50 --- 110	30	
2,4,6-Trichlorophenol	16.3	ug/L			20.0	82	50 --- 115	30	
2,4-Dichlorophenol	16.0	ug/L			20.0	80	50 --- 105	30	
2,4-Dimethylphenol	14.8	ug/L			20.0	74	30 --- 110	30	
2,4-Dinitrophenol	17.1	ug/L			20.0	86	15 --- 140	30	
2,4-Dinitrotoluene	18.1	ug/L			20.0	90	50 --- 120	30	
2,6-Dinitrotoluene	17.4	ug/L			20.0	87	50 --- 115	30	
2-Chloronaphthalene	14.8	ug/L			20.0	74	50 --- 105	30	
2-Chlorophenol	14.8	ug/L			20.0	74	35 --- 105	30	
2-Methylnaphthalene	15.0	ug/L			20.0	75	45 --- 105	30	
2-Methylphenol	13.9	ug/L			20.0	70	40 --- 110	30	
2-Nitroaniline	17.2	ug/L			20.0	86	50 --- 115	30	
2-Nitrophenol	15.7	ug/L			20.0	78	40 --- 115	30	
3 & 4-Methylphenol	13.4	ug/L			20.0	67	30 --- 110	30	
3,3'-Dichlorobenzidine	15.1	ug/L			20.0	76	20 --- 110	30	
3-Nitroaniline	15.1	ug/L			20.0	76	20 --- 125	30	
4,6-Dinitro-2-methylphenol	18.5	ug/L			20.0	92	40 --- 130	30	
4-Bromophenyl-phenyl ether	17.6	ug/L			20.0	88	50 --- 115	30	
4-Chloro-3-methylphenol	16.8	ug/L			20.0	84	45 --- 110	30	
4-Chloroaniline	14.4	ug/L			20.0	72	15 --- 110	30	
4-Chlorophenyl-phenyl ether	16.9	ug/L			20.0	84	50 --- 110	30	
4-Nitroaniline	17.8	ug/L			20.0	89	35 --- 120	30	
4-Nitrophenol	9.80	ug/L			20.0	49	0 --- 125	30	
Acenaphthene	15.6	ug/L			20.0	78	45 --- 110	30	
Acenaphthylene	15.6	ug/L			20.0	78	50 --- 105	30	
Acetophenone	15.6	ug/L			20.0	78	40 --- 124	30	
Anthracene	18.1	ug/L			20.0	90	55 --- 110	30	
Atrazine	20.1	ug/L			20.0	100	50 --- 150	30	
Benzaldehyde	13.9	ug/L			20.0	70	15 --- 118	30	
Benzo(a)anthracene	17.9	ug/L			20.0	90	55 --- 110	30	
Benzo(a)pyrene	17.3	ug/L			20.0	86	55 --- 110	30	
Benzo(b)fluoranthene	17.4	ug/L			20.0	87	45 --- 120	30	
Benzo(g,h,i)perylene	16.8	ug/L			20.0	84	40 --- 125	30	
Benzo(k)fluoranthene	17.2	ug/L			20.0	86	45 --- 125	30	
Bis(2-chloroethoxy)methane	15.8	ug/L			20.0	79	45 --- 105	30	
Bis(2-chloroethyl)ether	14.7	ug/L			20.0	74	35 --- 110	30	
Bis(2-chloroisopropyl)ether	14.8	ug/L			20.0	74	25 --- 130	30	
Bis(2-ethylhexyl)phthalate	17.8	ug/L			20.0	89	40 --- 125	30	
Butylbenzylphthalate	18.0	ug/L			20.0	90	45 --- 115	30	
Caprolactam	6.53	ug/L			20.0	33	10 --- 120	30	
Carbazole	18.4	ug/L			20.0	92	50 --- 115	30	

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

**Lab Control Spike Water**

Analytical Run #:	126625	Analysis Date:	06/01/2016	Prep Batch #:	57458	Matrix:	LIQUID
CTLab #:	728581	Analysis Time:	16:48	Prep Date/Time:	05/27/2016 15:00	Method:	SW8270
Parent Sample #:		Analyst:	RPN	Prep Analyst:	AJZ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chrysene	17.7	ug/L			20.0	88	55 --- 110	30	
Di-n-butylphthalate	18.4	ug/L			20.0	92	55 --- 115	30	
Di-n-octylphthalate	17.8	ug/L			20.0	89	35 --- 135	30	
Dibenzo(a,h)anthracene	16.7	ug/L			20.0	84	40 --- 125	30	
Dibenzofuran	16.4	ug/L			20.0	82	55 --- 105	30	
Diethylphthalate	17.4	ug/L			20.0	87	40 --- 120	30	
Dimethylphthalate	17.2	ug/L			20.0	86	25 --- 125	30	
Fluoranthene	18.4	ug/L			20.0	92	55 --- 115	30	
Fluorene	16.6	ug/L			20.0	83	50 --- 110	30	
Hexachlorobenzene	17.6	ug/L			20.0	88	50 --- 110	30	
Hexachlorobutadiene	13.9	ug/L			20.0	70	25 --- 105	30	
Hexachlorocyclopentadiene	13.4	ug/L			20.0	67	45 --- 113	30	
Hexachloroethane	13.5	ug/L			20.0	68	30 --- 95	30	
Indeno(1,2,3-cd)pyrene	16.5	ug/L			20.0	82	45 --- 125	30	
Isophorone	15.5	ug/L			20.0	78	50 --- 110	30	
N-Nitroso-di-n-propylamine	15.7	ug/L			20.0	78	35 --- 130	30	
N-Nitrosodiphenylamine & Diphn	35.7	ug/L			40.0	89	50 --- 110	30	
Naphthalene	15.0	ug/L			20.0	75	40 --- 100	30	
Nitrobenzene	15.5	ug/L			20.0	78	45 --- 110	30	
Pentachlorophenol	19.7	ug/L			20.0	98	40 --- 115	30	
Phenanthrene	17.8	ug/L			20.0	89	50 --- 115	30	
Phenol	7.58	ug/L			20.0	38	0 --- 115	30	
Pyrene	17.6	ug/L			20.0	88	50 --- 130	30	

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Method Blank Water***

Analytical Run #:	126625	Analysis Date:	06/01/2016	Prep Batch #:	57458	Matrix:	LIQUID
CTLab #:	728580	Analysis Time:	16:25	Prep Date/Time:	05/27/2016 15:00	Method:	SW8270
Parent Sample #:		Analyst:	RPN	Prep Analyst:	AJZ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,1'-Biphenyl	0.15	ug/L	U				2.00		
1,2,4,5-Tetrachlorobenzene	0.17	ug/L	U		0		0.50		
2,4,5-Trichlorophenol	1.1	ug/L	U		0		2.5		
2,4,6-Trichlorophenol	1.0	ug/L	U		0		2.5		
2,4-Dichlorophenol	1.0	ug/L	U		0		2.5		
2,4-Dimethylphenol	0.82	ug/L	U		0		2.5		
2,4-Dinitrophenol	1.5	ug/L	U		0		5.0		
2,4-Dinitrotoluene	0.21	ug/L	U		0		0.50		
2,6-Dinitrotoluene	0.28	ug/L	U		0		0.50		
2-Chloronaphthalene	0.18	ug/L	U		0		0.50		
2-Chlorophenol	0.87	ug/L	U		0		2.5		
2-Methylnaphthalene	0.17	ug/L	U		0		0.50		
2-Methylphenol	0.86	ug/L	U		0		2.5		
2-Nitroaniline	0.22	ug/L	U		0		1.00		
2-Nitrophenol	0.90	ug/L	U		0		2.5		
3 & 4-Methylphenol	1.4	ug/L	U		0		4.5		
3,3'-Dichlorobenzidine	0.66	ug/L	U		0		1.25		
3-Nitroaniline	0.26	ug/L	U		0		1.00		
4,6-Dinitro-2-methylphenol	1.6	ug/L	U		0		5.0		
4-Bromophenyl-phenyl ether	0.20	ug/L	U		0		1.00		
4-Chloro-3-methylphenol	0.76	ug/L	U		0		2.50		
4-Chloroaniline	0.12	ug/L	U		0		0.50		
4-Chlorophenyl-phenyl ether	0.18	ug/L	U		0		0.50		
4-Nitroaniline	0.15	ug/L	U		0		0.50		
4-Nitrophenol	1.1	ug/L	U		0		5.0		
Acenaphthene	0.18	ug/L	U		0		0.50		
Acenaphthylene	0.17	ug/L	U		0		0.50		
Acetophenone	0.27	ug/L	U		0		0.50		
Anthracene	0.11	ug/L	U		0		0.50		
Atrazine	0.26	ug/L	U				0.50		
Benzaldehyde	0.25	ug/L	U				0.50		
Benzo(a)anthracene	0.12	ug/L	U		0		0.50		
Benzo(a)pyrene	0.14	ug/L	U		0		0.50		
Benzo(b)fluoranthene	0.17	ug/L	U		0		0.50		
Benzo(g,h,i)perylene	0.21	ug/L	U		0		0.50		
Benzo(k)fluoranthene	0.20	ug/L	U		0		0.50		
Bis(2-chloroethoxy)methane	0.19	ug/L	U		0		0.50		
Bis(2-chloroethyl)ether	0.21	ug/L	U		0		0.50		
Bis(2-chloroisopropyl)ether	0.22	ug/L	U		0		0.50		
Bis(2-ethylhexyl)phthalate	0.44	ug/L	U		0		1.00		
Butylbenzylphthalate	0.47	ug/L	U		0		1.00		
Caprolactam	0.19	ug/L	U				1.00		
Carbazole	0.12	ug/L	U		0		0.50		

TETRA TECH

Project Name: FORD HEIGHTS TIRE FIRE

SDG #: 0

Folder #: 119330

Project Number:

***Method Blank Water***

Analytical Run #:	126625	Analysis Date:	06/01/2016	Prep Batch #:	57458	Matrix:	LIQUID
CTLab #:	728580	Analysis Time:	16:25	Prep Date/Time:	05/27/2016 15:00	Method:	SW8270
Parent Sample #:		Analyst:	RPN	Prep Analyst:	AJZ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chrysene	0.16	ug/L		U	0		0.50		
Di-n-butylphthalate	0.67	ug/L		U	0		2.00		
Di-n-octylphthalate	0.49	ug/L		U	0		1.00		
Dibenzo(a,h)anthracene	0.17	ug/L		U	0		0.50		
Dibenzofuran	0.19	ug/L		U	0		0.50		
Diethylphthalate	0.45	ug/L		U	0		1.00		
Dimethylphthalate	0.54	ug/L		U	0		1.00		
Fluoranthene	0.13	ug/L		U	0		0.50		
Fluorene	0.19	ug/L		U	0		0.50		
Hexachlorobenzene	0.27	ug/L		U	0		0.50		
Hexachlorobutadiene	0.18	ug/L		U	0		0.50		
Hexachlorocyclopentadiene	0.26	ug/L		U	0		1.00		
Hexachloroethane	0.22	ug/L		U	0		0.50		
Indeno(1,2,3-cd)pyrene	0.18	ug/L		U	0		0.50		
Isophorone	0.18	ug/L		U	0		0.50		
N-Nitroso-di-n-propylamine	0.18	ug/L		U	0		0.50		
N-Nitrosodiphenylamine & Diphn	0.36	ug/L		U	0		1.00		
Naphthalene	0.18	ug/L		U	0		0.50		
Nitrobenzene	0.16	ug/L		U	0		0.50		
Pentachlorophenol	1.1	ug/L		U	0		2.5		
Phenanthrene	0.30	ug/L		U	0		0.50		
Phenol	0.48	ug/L		U	0		2.50		
Pyrene	0.13	ug/L		U	0		0.50		

## Sample Condition Report

Folder #: 119330	Print Date / Time:	05/27/2016	10:54	
Client: TETRA TECH	Received Date / Time / By:	05/27/2016	10:15	JLS
Project Name: FORD HEIGHTS TIRE FIRE	Log-In Date / Time / By:	05/27/2016	10:54	JLS
Project Phase:	Project #:			PM: BMS
Coolers: UNMARKED	Temperature:	2.6 C	On Ice:	Y
Custody Seals Present : N	COC Present?: Y	Complete?		
Seal Intact? N	Numbers:	NONE		
Ship Method: FEDEX EXPRESS	Tracking Number:	655474606673		
Adequate Packaging: Y	Temp Blank Enclosed?	Y		

Notes: THE SAMPLE WAS RECEIVED IN GOOD CONDITION ON ICE.

NO CUSTODY SEALS WERE PRESENT UPON RECEIPT, TAPE WAS INTACT.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
<b>729177</b> FHTF-SW-001-052416				
	AMBER GL	1	/	8270
	AMBER GL	1	/	8270
	<b>Total # of Containers of Type</b>	<b>( AMBER GL )</b>	<b>= 2</b>	
<b>729177</b> FHTF-SW-001-052416				
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	VOA HCL	1	/	VOC
	<b>Total # of Containers of Type</b>	<b>( VOA HCL )</b>	<b>= 3</b>	

Condition Code Condition Description  
 1 Sample Received OK



## **Ice Present**

Temperature 2.6

1R Gun# b1

Initials JH -----

Date \_\_\_\_\_ Time J/J/S-

Cooler#: 1234567890, KY

Cooler Receipt Form .

ffi1N1D:HBGA (801)264-2854

BON I @ AAIKEN  
77m / :1AWij } TESTING COM.

ORIGIN ID:CHIA (312) 201-7700  
1'IAILROO' I  
TETRA TECH INC - EMI DIVISION  
1 S. WACKER DR  
37TH FLOOR  
CHICAGO IL 60606  
UNITED STATES US

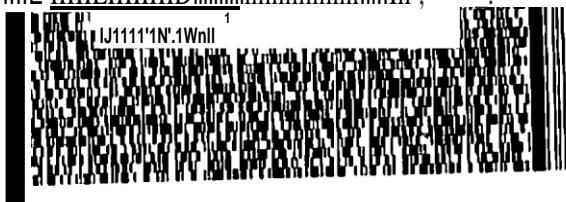
SHIP DATE: 261'1AY16  
ACTWGT: 23.5 LB 1'IAN  
AD: 0563371/CAFE2912

## - BILL SENDER

**TO SAMPLES RECEIVING  
CT LABORATORIES  
1230 LANGE COURT**

**BARABOO WI 53913**  
(608) 356-2760  
**PO: 103X90260001S05140**

THE THREE MUSKETEERS



FedEx  
Express

1E1!

**FRI · 27 MAY 10:10A**  
**PRI RITY OVERNIGHT**  
6554 7460 6673  
**55 '1SNA**  
53913.  
UI-US **MSN-**



# 1311.)1 Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATfo(ji)STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

June 01, 2016

Tetra Tech EM Inc.  
1 South Wacker Drive  
Chicago, IL 60606

Telephone: (312) 201-7700  
Fax: (312) 938-0118

Analytical Report for STAT Work Order: 16051170 Revision 0

RE 103X9026000 1 5051605016, Ford Heights Tire Fire, Ford Heights, IL

Dear Matt Villicana:

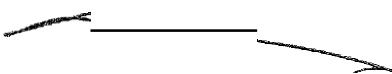
STAT Analysis received 1 sample for the referenced project on 5/27/2016 4:00:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Craig Chawla

Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

**Client:** Tetra Tech EM Inc.**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, F    **Work Order Sample Summary****Work Order:** 16051170 Revision 0

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
16051170-001A	FHTF-SW-002-052616		5/26/2016 1:00:00 PM	5/27/2016
16051170-001B	FHTF-SW-002-052616		5/26/2016 1:00:00 PM	5/27/2016
16051170-001C	FHTF-SW-002-052616		5/26/2016 1:00:00 PM	5/27/2016

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**CLIENT:** Tetra Tech EM Inc.**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford H      **CASE NARRATIVE****Work Order:** 16051170 Revision 0

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Please refer to Analytical QC Summary Report for QC outliers.

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

**Client:** Tetra Tech EM Inc.

**Client Sample ID:** FHTF-SW-002-052616

**Work Order:** 16051170 Revision 0

**Collection Date:** 5/26/2016 1:00:00 PM

**Project:** 103X90260001 5051605016, Ford Heights Tire Fir

**Matrix:** Aqueous

**Lab ID:** 16051170-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>						
Acetone	1.0	0.20		mg/L	10	6/1/2016
Benzene	0.26	0.050		mg/L	10	6/1/2016
Bromodichloromethane	ND	0.0050		mg/L	1	6/1/2016
Bromoform	ND	0.0050		mg/L	1	6/1/2016
Bromomethane	ND	0.010		mg/L	1	6/1/2016
2-Butanone	0.39	0.020		mg/L	1	6/1/2016
Carbon disulfide	ND	0.010		mg/L	1	6/1/2016
Carbon tetrachloride	ND	0.0050		mg/L	1	6/1/2016
Chlorobenzene	ND	0.0050		mg/L	1	6/1/2016
Chloroethane	ND	0.010		mg/L	1	6/1/2016
Chloroform	ND	0.0050		mg/L	1	6/1/2016
Chloromethane	ND	0.010		mg/L	1	6/1/2016
Dibromochloromethane	ND	0.0050		mg/L	1	6/1/2016
1,1-Dichloroethane	ND	0.0050		mg/L	1	6/1/2016
1,2-Dichloroethane	ND	0.0050		mg/L	1	6/1/2016
1,1-Dichloroethene	ND	0.0050		mg/L	1	6/1/2016
cis-1,2-Dichloroethene	ND	0.0050		mg/L	1	6/1/2016
trans-1,2-Dichloroethene	ND	0.0050		mg/L	1	6/1/2016
1,2-Dichloropropane	ND	0.0050		mg/L	1	6/1/2016
cis-1,3-Dichloropropene	ND	0.0010		mg/L	1	6/1/2016
trans-1,3-Dichloropropene	ND	0.0010		mg/L	1	6/1/2016
Ethylbenzene	0.030	0.0050		mg/L	1	6/1/2016
2-Hexanone	ND	0.020		mg/L	1	6/1/2016
4-Methyl-2-pentanone	0.58	0.20		mg/L	10	6/1/2016
Methylene chloride	ND	0.0050		mg/L	1	6/1/2016
Methyl tert-butyl ether	ND	0.0050		mg/L	1	6/1/2016
Styrene	ND	0.0050		mg/L	1	6/1/2016
1,1,2,2-Tetrachloroethane	ND	0.0050		mg/L	1	6/1/2016
Tetrachloroethene	ND	0.0050		mg/L	1	6/1/2016
Toluene	0.20	0.0050		mg/L	1	6/1/2016
1,1,1-Trichloroethane	ND	0.0050		mg/L	1	6/1/2016
1,1,2-Trichloroethane	ND	0.0050		mg/L	1	6/1/2016
Trichloroethene	ND	0.0050		mg/L	1	6/1/2016
Vinyl chloride	ND	0.0020		mg/L	1	6/1/2016
Xylenes, Total	0.073	0.015		mg/L	1	6/1/2016
<b>Total Petroleum Hydrocarbons (GRO) by GCMS SW8260B</b>						
Gasoline Range Organics	1.9	0.50	*	Prep Date: mg/L	1	Analyst: PS 6/1/2016

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

# STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

Client: Tetra Tech EM Inc.

Client Sample ID: FHTF-SW-002-052616

Work Order: 16051170 Revision 0

Collection Date: 5/26/2016 1:00:00 PM

Project: 103X90260001 5051605016, Ford Heights Tire Fir

Matrix: Aqueous

Lab ID: 16051170-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
Aniline	0.90	0.50		mg/L	100	5/31/2016
Benzidine	ND	0.0050		mg/L	1	5/31/2016
Benzoic acid	33	25		mg/L	5000	6/1/2016
Benzyl alcohol	0.14	0.050		mg/L	10	5/31/2016
Bis(2-chloroethoxy)methane	ND	0.0050		mg/L	1	5/31/2016
Bis(2-chloroethyl)ether	ND	0.0050		mg/L	1	5/31/2016
Bis(2-ethylhexyl)phthalate	ND	0.0050		mg/L	1	5/31/2016
4-Bromophenyl phenyl ether	ND	0.0050		mg/L	1	5/31/2016
Butyl benzyl phthalate	ND	0.0050		mg/L	1	5/31/2016
4-Chloroaniline	ND	0.0050		mg/L	1	5/31/2016
4-Chloro-3-methylphenol	ND	0.0050		mg/L	1	5/31/2016
2-Choronaphthalene	ND	0.0050		mg/L	1	5/31/2016
2-Chlorophenol	ND	0.0050		mg/L	1	5/31/2016
4-Chlorophenyl phenyl ether	ND	0.0050		mg/L	1	5/31/2016
Dibenzofuran	ND	0.0050		mg/L	1	5/31/2016
1,2-Dichlorobenzene	ND	0.0050		mg/L	1	5/31/2016
1,3-Dichlorobenzene	ND	0.0050		mg/L	1	5/31/2016
1,4-Dichlorobenzene	ND	0.0050		mg/L	1	5/31/2016
3,3'-Dichlorobenzidine	ND	0.010		mg/L	1	5/31/2016
2,4-Dichlorophenol	ND	0.0050		mg/L	1	5/31/2016
Diethyl phthalate	ND	0.0050		mg/L	1	5/31/2016
2,4-Dimethylphenol	0.21	0.050		mg/L	100	5/31/2016
Dimethyl phthalate	ND	0.0050		mg/L	1	5/31/2016
4,6-Dinitro-2-methylphenol	ND	0.025		mg/L	1	5/31/2016
2,4-Dinitrophenol	ND	0.025		mg/L	1	5/31/2016
Di-n-butyl phthalate	ND	0.0050		mg/L	1	5/31/2016
Di-n-octyl phthalate	ND	0.0050		mg/L	1	5/31/2016
Hexachlorobenzene	ND	0.0050		mg/L	1	5/31/2016
Hexachlorobutadiene	ND	0.0050		mg/L	1	5/31/2016
Hexachlorocyclopentadiene	ND	0.0050		mg/L	1	5/31/2016
Hexachloroethane	ND	0.0050		mg/L	1	5/31/2016
Isophorone	ND	0.0050		mg/L	1	5/31/2016
2-Methylnaphthalene	ND	0.0050		mg/L	1	5/31/2016
2-Methylphenol	0.99	0.50		mg/L	100	5/31/2016
4-Methylphenol	0.61	0.50		mg/L	100	5/31/2016
2-Nitroaniline	ND	0.025		mg/L	1	5/31/2016
3-Nitroaniline	ND	0.025		mg/L	1	5/31/2016
4-Nitroaniline	ND	0.025		mg/L	1	5/31/2016

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

<b>Client:</b>	Tetra Tech EM Inc.	<b>Client Sample ID:</b>	FHTF-SW-002-052616
<b>Work Order:</b>	16051170 Revision 0	<b>Collection Date:</b>	5/26/2016 1:00:00 PM
<b>Project:</b>	103X90260001 5051605016, Ford Heights Tire Fir	<b>Matrix:</b>	Aqueous
<b>Lab ID:</b>	16051170-001		

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Semivolatile Organic Compounds by GC/MS</b>						
2-Nitrophenol	ND	0.0050		mg/L	1	5/31/2016
4-Nitrophenol	ND	0.025		mg/L	1	5/31/2016
N-Nitrosodimethylamine	ND	0.0050		mg/L	1	5/31/2016
N-Nitrosodiphenylamine	ND	0.0050		mg/L	1	5/31/2016
2, 2'-oxybis(1-Chloropropane)	ND	0.0050		mg/L	1	5/31/2016
Phenol	1.7	0.50		mg/L	100	5/31/2016
Pyridine	0.081	0.050		mg/L	10	5/31/2016
1,2,4-Trichlorobenzene	ND	0.0050		mg/L	1	5/31/2016
2,4,5-Trichlorophenol	ND	0.010		mg/L	1	5/31/2016
2,4,6-Trichlorophenol	ND	0.0050		mg/L	1	5/31/2016
<b>Semivolatile Organic Compounds by GC/MS</b>						
Acenaphthene	ND	0.0010		mg/L	1	5/31/2016
Acenaphthylene	ND	0.0010		mg/L	1	5/31/2016
Anthracene	ND	0.0010		mg/L	1	5/31/2016
Benz(a)anthracene	ND	0.00010		mg/L	1	5/31/2016
Benzo(a)pyrene	ND	0.00010		mg/L	1	5/31/2016
Benzo(b)fluoranthene	ND	0.00010		mg/L	1	5/31/2016
Benzo(g,h,i)perylene	ND	0.0010		mg/L	1	5/31/2016
Benzo(k)fluoranthene	ND	0.00010		mg/L	1	5/31/2016
Chrysene	ND	0.00010		mg/L	1	5/31/2016
Dibenz(a,h)anthracene	ND	0.00010		mg/L	1	5/31/2016
Fluoranthene	ND	0.0010		mg/L	1	5/31/2016
Fluorene	ND	0.0010		mg/L	1	5/31/2016
Indeno(1,2,3-cd)pyrene	ND	0.00010		mg/L	1	5/31/2016
Naphthalene	0.0068	0.0010		mg/L	1	5/31/2016
Phenanthrene	ND	0.0010		mg/L	1	5/31/2016
Pyrene	ND	0.0010		mg/L	1	5/31/2016
Carbazole	ND	0.00010		mg/L	1	5/31/2016
2,4-Dinitrotoluene	ND	0.00010		mg/L	1	5/31/2016
2,6-Dinitrotoluene	ND	0.00010		mg/L	1	5/31/2016
N-Nitrosodi-n-propylamine	ND	0.00010		mg/L	1	5/31/2016
Nitrobenzene	ND	0.0010		mg/L	1	5/31/2016
Pentachlorophenol	ND	0.00050		mg/L	1	5/31/2016
<b>Total Petroleum Hydrocarbons in Water</b>						
TPH (DRO)	8.8	1.0		mg/L	10	5/31/2016
TPH (ERO)	0.15	0.10	*	mg/L	1	5/31/2016

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded

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Date Reported: June 01, 2016

## ANALYTICAL RESULTS

Date Printed: June 01, 2016

**Client:** Tetra Tech EM Inc.

**Client Sample ID:** FHTF-SW-002-052616

**Work Order:** 16051170 Revision 0

**Collection Date:** 5/26/2016 1:00:00 PM

**Project:** 103X90260001 5051605016, Ford Heights Tire Fir

**Matrix:** Aqueous

**Lab ID:** 16051170-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
<b>Metals by ICP/MS</b>						
Arsenic	0.0043	0.0040		mg/L	2	5/31/2016
Barium	0.084	0.0040		mg/L	2	5/31/2016
Cadmium	ND	0.0020		mg/L	2	5/31/2016
Chromium	ND	0.0040		mg/L	2	5/31/2016
Lead	0.0038	0.0020		mg/L	2	5/31/2016
Selenium	0.014	0.0040		mg/L	2	5/31/2016
Silver	ND	0.0040		mg/L	2	5/31/2016
<b>Mercury</b>						
Mercury		<b>SW7470A</b>		Prep Date: <b>5/31/2016</b>	Analyst: <b>LB</b>	
	ND	0.00020		mg/L	1	5/31/2016

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
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HT - Sample received past holding time  
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
H - Holding time exceeded



# i-ifA.i1Analysis Corporation

## Sample Receipt Checklist

Client Name TETRA CHICAGO

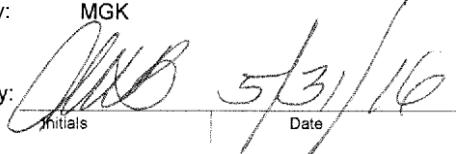
Work Order Number 16051170

Checklist completed by: L - ;p/ — -/4 m  
 Signature /ff,,r,f/i."t- Date 1/-

Date and Time Received: 5/27/2016 4:00:00 PM

Received by: MGK

Reviewed by:

 Initials

Date 5/31/16

Matrix:

Carrier name Client Delivered

Shipping container/cooler in good condition?	Yes	NoD	Not Present D
Custody seals intact on shipping container/cooler?	Yes D	NoD	Not Present
Custody seals intact on sample bottles? <i>/krra; ,.....i.(</i>	Yes D	NoD	Not Present
Chain of custody present?	Yes	NoD	
Chain of custody signed when relinquished and received?	Yes	NoD	
Chain of custody agrees with sample labels/containers?	Yes	NoD	
Samples in proper container/bottle?	Yes	NoD	
Sample containers intact?	Yes	NoD	
Sufficient sample volume for indicated test?	Yes	NoD	
All samples received within holding time?	Yes	No	
Container or Temp Blank temperature in compliance?	Yes	NoD	Temperature 3.a.c
Water - VOA vials have zero headspace?	No VOA vials submitted D	Yes	NoD
Water Samples pH checked?	Yes	No	Checked by: /11/--
Water Samples properly preserved?	Yes	NoD	pH Adjusted? /J0

Any No response must be detailed in the comments section below.

Comments: \_\_\_\_\_

*Sample received in good condition*

*Sample received in good condition*

*Sample received in good condition*

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_

**STAT Analysis Corporation**

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire,  
**Test No:** SW8260B      **Matrix:** W

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK060116-7	101	101	107	106				
VLCS060116-7	101	102	107	105				
VLCSD060116-7	104	103	107	107				
16051170-001A:10	99.5	98.2	104	102				
16051170-001A	99.6	101	106	99.5				

Acronym	Surrogate	QC Limits
BR4FBZ	= 4-Bromofluorobenzene	79-114
BZMED8	= Toluene-d8	91-109
DBFM	= Dibromofluoromethane	85-123
DCA12D4	= 1,2-Dichloroethane-d4	86-119

\* Surrogate recovery outside acceptance limits

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**GCMS Volatiles**  
**BatchID: R121590**

**ANALYTICAL RUN SUMMARY**

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed	
3290451	BFB060116-7	TUNE	BFB	R121590	1	06/01/2016 06:30	
3290451	BFB060116-7	TUNE	BFB	R121590	1	06/01/2016 06:30	
3290485	VSTD050	CCV	VOC_W+	R121590	1	06/01/2016 06:48	
3290485	VSTD050	CCV	VOC_W+	R121590	1	06/01/2016 06:48	
3290452	GSTD2000	CCV	VOC-GRO_W	R121590	1	06/01/2016 07:22	
3290452	GSTD2000	CCV	VOC-GRO_W	R121590	1	06/01/2016 07:22	
3290453	VBLK060116-7	MBLK	VOC-GRO_W	R121590	1	06/01/2016 07:57	
3290453	VBLK060116-7	MBLK	VOC-GRO_W	R121590	1	06/01/2016 07:57	
3290486	VBLK060116-7	MBLK	VOC_W+	R121590	1	06/01/2016 07:57	
3290486	VBLK060116-7	MBLK	VOC_W+	R121590	1	06/01/2016 07:57	
3290455	GLCS060116R-7	LCS	VOC-GRO_W	R121590	1	06/01/2016 09:14	
3290455	GLCS060116R-7	LCS	VOC-GRO_W	R121590	1	06/01/2016 09:14	
3290456	GLCSD060116-7	LCSD	VOC-GRO_W	R121590	1	06/01/2016 09:57	
3290456	GLCSD060116-7	LCSD	VOC-GRO_W	R121590	1	06/01/2016 09:57	
3290487	VLCS060116-7	LCS	VOC_W+	R121590	1	06/01/2016 10:31	
3290487	VLCS060116-7	LCS	VOC_W+	R121590	1	06/01/2016 10:31	
3290488	VLCSD060116-7	LCSD	VOC_W+	R121590	1	06/01/2016 11:07	
3290488	VLCSD060116-7	LCSD	VOC_W+	R121590	1	06/01/2016 11:07	
3290490	16051170-001A	SAMP	VOC_W	R121590	10	06/01/2016 11:42	
3290490	16051170-001A	SAMP	VOC_W	R121590	10	06/01/2016 11:42	
3290465	16051170-001A	SAMP	VOC-GRO_W	R121590	1	06/01/2016 12:17	
3290465	16051170-001A	SAMP	VOC-GRO_W	R121590	1	06/01/2016 12:17	
3290509	16051170-001A	SAMP	VOC_W	R121590	1	06/01/2016 12:17	
3290509	16051170-001A	SAMP	VOC_W	R121590	1	06/01/2016 12:17	
3290522	16051035-001A	SAMP	VOC_TCLP	R121590	10	06/01/2016 13:27	
3290522	16051035-001A	SAMP	VOC_TCLP	R121590	10	06/01/2016 13:27	

**QC SUMMARY**

Sample ID: VBLK060116-7	Customer ID: ZZZZZ	SampType: MBLK	Units: mg/L	TestNo: SW8260B	Prep Date: 6/1/2016	Analysis Date: 6/1/2016	Run ID: VOA-7_160601A	SeqNo: 3290486				
Analyte				PQL	SPK value	Val	% REC	Low	High	RPD	% RPD	RPD Qual
1,1,1-Trichloroethane			ND	0.0050								
1,1,2,2-Tetrachloroethane			ND	0.0050								
1,1,2-Trichloroethane			ND	0.0050								
1,1-Dichloroethane			ND	0.0050								
1,1-Dichloroethene			ND	0.0050								
1,2-Dichloroethane			ND	0.0050								
1,2-Dichloropropane			ND	0.0050								
2-Butanone			ND	0.020								
2-Hexanone			ND	0.020								
4-Methyl-2-pentanone			ND	0.020								
Acetone			0.00372	0.020								J
Benzene			ND	0.0050								
Bromodichloromethane			ND	0.0050								
Bromoform			ND	0.0050								
Bromomethane			ND	0.010								

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

## ANALYTICAL QC SUMMARY REPORT

### GCMS Volatiles

**BatchID: R121590**

Sample ID: <b>VBLK060116-7</b>	Customer ID: <b>ZZZZZ</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	TestNo: <b>SW8260B</b>	Prep Date: <b>6/1/2016</b>	Analysis Date: <b>6/1/2016</b>	Run ID: <b>VOA-7_160601A</b>	SeqNo: <b>3290486</b>			
Analyte	Result		PQL	SPK value	% Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit Qual
Chlorobenzene		ND		0.0050							
Chloroethane		ND		0.010							
Chloroform		ND		0.0050							
Chloromethane		ND		0.010							
cis-1,2-Dichloroethene		ND		0.0050							
cis-1,3-Dichloropropene		ND		0.0010							
Dibromochloromethane		ND		0.0050							
Ethylbenzene		ND		0.0050							
Methyl tert-butyl ether		ND		0.0050							
Methylene chloride		0.00035		0.0050							J
Styrene		ND		0.0050							
Tetrachloroethene		ND		0.0050							
Toluene		ND		0.0050							
trans-1,2-Dichloroethene		ND		0.0050							
trans-1,3-Dichloropropene		ND		0.0010							
Trichloroethene		ND		0.0050							
Vinyl chloride		ND		0.0020							
Xylenes, Total		ND		0.015							

Sample ID: <b>VLCS060116-7</b>	Customer ID: <b>ZZZZZ</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	TestNo: <b>SW8260B</b>	Prep Date: <b>6/1/2016</b>	Analysis Date: <b>6/1/2016</b>	Run ID: <b>VOA-7_160601A</b>	SeqNo: <b>3290487</b>			
Analyte	Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit Qual
1,1,1-Trichloroethane		0.01868	0.0050	0.02	0	93.4	70	130	0	0	
1,1,2,2-Tetrachloroethane		0.02004	0.0050	0.02	0	100	70	130	0	0	
1,1,2-Trichloroethane		0.01988	0.0050	0.02	0	99.4	70	130	0	0	
1,1-Dichloroethane		0.02073	0.0050	0.02	0	104	70	130	0	0	
1,1-Dichloroethene		0.0207	0.0050	0.02	0	104	70	130	0	0	
1,2-Dichloroethane		0.01762	0.0050	0.02	0	88.1	70	130	0	0	
1,2-Dichloropropane		0.01954	0.0050	0.02	0	97.7	70	130	0	0	
2-Butanone		0.04334	0.020	0.04	0	108	70	130	0	0	
2-Hexanone		0.04138	0.020	0.04	0	103	70	130	0	0	
4-Methyl-2-pentanone		0.04224	0.020	0.04	0	106	70	130	0	0	
Acetone		0.04357	0.020	0.04	0.00372	99.6	50	150	0	0	
Benzene		0.02041	0.0050	0.02	0	102	70	130	0	0	
Bromodichloromethane		0.02001	0.0050	0.02	0	100	70	130	0	0	
Bromoform		0.01882	0.0050	0.02	0	94.1	70	130	0	0	
Bromomethane		0.02108	0.010	0.02	0	105	70	130	0	0	
Carbon disulfide		0.0449	0.010	0.04	0	112	70	130	0	0	
Carbon tetrachloride		0.01914	0.0050	0.02	0	95.7	70	130	0	0	
Chlorobenzene		0.01984	0.0050	0.02	0	99.2	70	130	0	0	
Chloroethane		0.02104	0.010	0.02	0	105	70	130	0	0	
Chloroform		0.02059	0.0050	0.02	0	103	70	130	0	0	
Chloromethane		0.02007	0.010	0.02	0	100	70	130	0	0	
cis-1,2-Dichloroethene		0.02088	0.0050	0.02	0	104	70	130	0	0	
cis-1,3-Dichloropropene		0.01861	0.0010	0.02	0	93	70	130	0	0	
Dibromochloromethane		0.01959	0.0050	0.02	0	98	70	130	0	0	
Ethylbenzene		0.02037	0.0050	0.02	0	102	70	130	0	0	
Methyl tert-butyl ether		0.0219	0.0050	0.02	0	110	50	150	0	0	
Methylene chloride		0.02099	0.0050	0.02	0.00035	103	70	130	0	0	

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

<b>CLIENT:</b>	Tetra Tech EM Inc.	<b>ANALYTICAL QC SUMMARY REPORT</b>							
<b>Work Order:</b>	16051170	<b>GCMS Volatiles</b>							
<b>Project:</b>	103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei	<b>BatchID: R121590</b>							

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>VLCS060116-7</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8260B</b>		<b>6/1/2016</b>	<b>VOA-7_160601A</b>	<b>3290487</b>
Analyte								
Styrene		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
		0.02068	0.0050	0.02	0	103	70	130
Tetrachloroethene			0.0195	0.0050	0.02	0	97.5	70
Toluene			0.02047	0.0050	0.02	0	102	70
trans-1,2-Dichloroethene			0.0212	0.0050	0.02	0	106	70
trans-1,3-Dichloropropene			0.01874	0.0010	0.02	0	93.7	70
Trichloroethene			0.01799	0.0050	0.02	0	90	70
Vinyl chloride			0.02112	0.0020	0.02	0	106	70
Xylenes, Total			0.06066	0.015	0.06	0	101	70

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>VLCS060116-7</b>	<b>ZZZZZ</b>	<b>LCSD</b>	<b>mg/L</b>	<b>SW8260B</b>		<b>6/1/2016</b>	<b>VOA-7_160601A</b>	<b>3290488</b>
Analyte								
1,1,1-Trichloroethane		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
		0.01951	0.0050	0.02	0	97.6	70	130
1,1,2,2-Tetrachloroethane			0.021	0.0050	0.02	0	105	70
1,1,2-Trichloroethane			0.02039	0.0050	0.02	0	102	70
1,1-Dichloroethane			0.02151	0.0050	0.02	0	108	70
1,1-Dichloroethene			0.02102	0.0050	0.02	0	105	70
1,2-Dichloroethane			0.0178	0.0050	0.02	0	89	70
1,2-Dichloropropane			0.02009	0.0050	0.02	0	100	70
2-Butanone			0.04757	0.020	0.04	0	119	70
2-Hexanone			0.04195	0.020	0.04	0	105	70
4-Methyl-2-pentanone			0.04205	0.020	0.04	0	105	70
Acetone			0.04409	0.020	0.04	0.00372	101	50
Benzene			0.0208	0.0050	0.02	0	104	70
Bromodichloromethane			0.02058	0.0050	0.02	0	103	70
Bromoform			0.01858	0.0050	0.02	0	92.9	70
Bromomethane			0.02132	0.010	0.02	0	107	70
Carbon disulfide			0.04669	0.010	0.04	0	117	70
Carbon tetrachloride			0.01947	0.0050	0.02	0	97.4	70
Chlorobenzene			0.0204	0.0050	0.02	0	102	70
Chloroethane			0.0227	0.010	0.02	0	114	70
Chloroform			0.02131	0.0050	0.02	0	107	70
Chloromethane			0.01995	0.010	0.02	0	99.8	70
cis-1,2-Dichloroethene			0.02108	0.0050	0.02	0	105	70
cis-1,3-Dichloropropene			0.01883	0.0010	0.02	0	94.2	70
Dibromochloromethane			0.01943	0.0050	0.02	0	97.2	70
Ethylbenzene			0.0212	0.0050	0.02	0	106	70
Methyl tert-butyl ether			0.0217	0.0050	0.02	0	108	50
Methylene chloride			0.02159	0.0050	0.02	0.00035	106	70
Styrene			0.02118	0.0050	0.02	0	106	70
Tetrachloroethene			0.02027	0.0050	0.02	0	101	70
Toluene			0.02057	0.0050	0.02	0	103	70
trans-1,2-Dichloroethene			0.02193	0.0050	0.02	0	110	70
trans-1,3-Dichloropropene			0.01975	0.0010	0.02	0	98.8	70
Trichloroethene			0.01855	0.0050	0.02	0	92.8	70
Vinyl chloride			0.02246	0.0020	0.02	0	112	70
Xylenes, Total			0.06254	0.015	0.06	0	104	70

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range	
* - Non Accredited Parameter	H/HT - Holding Time Exceeded		

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**GCMS Volatiles**  
**BatchID: R121590**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>VBLK060116-7</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW8260B</b>		<b>6/1/2016</b>	<b>VOA-7_160601A</b>	<b>3290453</b>
Analyte		Result		PQL SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Gasoline Range Organics		ND	0.50				RPD Ref Val	RPD %RPD Limit Qual
						*		
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>GLCS060116R-7</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8260B</b>		<b>6/1/2016</b>	<b>VOA-7_160601A</b>	<b>3290455</b>
Analyte		Result		PQL SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Gasoline Range Organics		0.6836	0.50	1	0	68.4	50	150
						0	0	*
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>GLCSD060116-7</b>	<b>ZZZZZ</b>	<b>LCSD</b>	<b>mg/L</b>	<b>SW8260B</b>		<b>6/1/2016</b>	<b>VOA-7_160601A</b>	<b>3290456</b>
Analyte		Result		PQL SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Gasoline Range Organics		0.791	0.50	1	0	79.1	50	150
						0.6836	14.6	25
						*		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**STAT Analysis Corporation**

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire,  
**Test No:** SW8270C      **Matrix:** W

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
MB-92533	83.0	71.9	89.9	112	62.7	47.6	88.2	106
LCS-92533	69.3	59.3	79.4	103	48.8	39.2	75.2	102
LCSD-92533	80.6	79.4	89.4	109	57.9	41.9	88.2	101
16051170-001B	112 *	90.6	124 *	105	88.5	44.8	106	108

Acronym	Surrogate	QC Limits
CLPH2D4	= 2-Chlorophenol-d4	33-110
DCBZ12D4	= 1,2-Dichlorobenzene-d4	16-110
NO2BZD5	= Nitrobenzene-d5	35-114
PH246BR	= 2,4,6-Tribromophenol	10-123
PH2F	= 2-Fluorophenol	21-110
PHD5	= Phenol-d5	10-110
PHEN2F	= 2-Fluorobiphenyl	43-116
PHEND14	= 4-Terphenyl-d14	33-141

\* Surrogate recovery outside acceptance limits

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**GCMS Semivolatiles**  
**BatchID: 92533**

**PREP BATCH SUMMARY**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-92533			1	0	0	1	1.000	5/31/2016	5/31/2016
LCS-92533			1	0	0	1	1.000	5/31/2016	5/31/2016
LCSD-92533			1	0	0	1	1.000	5/31/2016	5/31/2016
16050946-001A	Aqueous	0.4	0	0	0	0.4	1.000	5/31/2016	5/31/2016
16050946-002A	Aqueous	0.4	0	0	0	0.4	1.000	5/31/2016	5/31/2016
16050946-003A	Aqueous	0.4	0	0	0	0.4	1.000	5/31/2016	5/31/2016
16050946-004A	Aqueous	0.4	0	0	0	0.4	1.000	5/31/2016	5/31/2016
16050946-005A	Aqueous	0.4	0	0	0	0.4	1.000	5/31/2016	5/31/2016
16051170-001B	Aqueous	1	0	0	0	1	1.000	5/31/2016	5/31/2016
16051175-001B	Aqueous	1	0	0	0	1	1.000	6/1/2016	6/1/2016
16051175-002B	Aqueous	1	0	0	0	1	1.000	6/1/2016	6/1/2016
16051175-003B	Aqueous	1	0	0	0	1	1.000	6/1/2016	6/1/2016
16051175-004B	Aqueous	1	0	0	0	1	1.000	6/1/2016	6/1/2016
16051175-005B	Aqueous	1	0	0	0	1	1.000	6/1/2016	6/1/2016

**QC SUMMARY**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:			
<b>MB-92533</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW8270C</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-7_160531A</b>	<b>3290207</b>			
Analyte		Result	PQL	SPK value	Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit Qual

Aniline	ND	0.025
Benzidine	ND	0.025
Benzoic acid	ND	0.025
Benzyl alcohol	ND	0.0050
Bis(2-chloroethoxy)methane	ND	0.0050
Bis(2-chloroethyl)ether	ND	0.0050
Bis(2-ethylhexyl)phthalate	ND	0.0060
4-Bromophenyl phenyl ether	ND	0.0050
Butyl benzyl phthalate	ND	0.0050
4-Chloroaniline	ND	0.0050
4-Chloro-3-methylphenol	ND	0.0050
2-Chloronaphthalene	ND	0.0050
2-Chlorophenol	ND	0.0050
4-Chlorophenyl phenyl ether	ND	0.0050
Dibenzofuran	ND	0.0050
1,2-Dichlorobenzene	ND	0.0050
1,3-Dichlorobenzene	ND	0.0050
1,4-Dichlorobenzene	ND	0.0050
3,3'-Dichlorobenzidine	ND	0.010
2,4-Dichlorophenol	ND	0.0050
Diethyl phthalate	ND	0.0050
2,4-Dimethylphenol	ND	0.0050
Dimethyl phthalate	ND	0.0050
4,6-Dinitro-2-methylphenol	ND	0.025
2,4-Dinitrophenol	ND	0.025
Di-n-butyl phthalate	ND	0.0050
Di-n-octyl phthalate	ND	0.0050
Hexachlorobenzene	ND	0.0050
Hexachlorobutadiene	ND	0.0050
Hexachlorocyclopentadiene	ND	0.0050

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

H/HT - Holding Time Exceeded

<b>CLIENT:</b>	Tetra Tech EM Inc.	<b>ANALYTICAL QC SUMMARY REPORT</b>							
<b>Work Order:</b>	16051170	<b>GCMS Semivolatiles</b>							
<b>Project:</b>	103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei	<b>BatchID: 92533</b>							

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>MB-92533</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW8270C</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-7_160531A</b>	<b>3290207</b>
Analyte								
		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit
								High Limit
							RPD Ref Val	% RPD
							RPD Limit	RPD Qual
Hexachloroethane		ND		0.0050				
Isophorone		ND		0.0050				
2-Methylnaphthalene		ND		0.0050				
2-Methylphenol		ND		0.0050				
4-Methylphenol		ND		0.0050				
2-Nitroaniline		ND		0.0050				
3-Nitroaniline		ND		0.025				
4-Nitroaniline		ND		0.025				
2-Nitrophenol		ND		0.0050				
4-Nitrophenol		ND		0.025				
N-Nitrosodimethylamine		ND		0.0050				
N-Nitrosodiphenylamine		ND		0.0050				
2, 2'-oxybis(1-Chloropropane)		ND		0.0050				
Phenol		ND		0.0050				
Pyridine		ND		0.0050				
1,2,4-Trichlorobenzene		ND		0.0050				
2,4,5-Trichlorophenol		ND		0.010				
2,4,6-Trichlorophenol		ND		0.0050				

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>LCS-92533</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8270C</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-7_160531A</b>	<b>3290209</b>
Analyte								
		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit
								High Limit
							RPD Ref Val	% RPD
							RPD Limit	RPD Qual
Acenaphthene		0.03829		0.0050	0.05	0	76.6	54
4-Chloro-3-methylphenol		0.08668		0.0050	0.1	0	86.7	49
2-Chlorophenol		0.0705		0.0050	0.1	0	70.5	44
1,4-Dichlorobenzene		0.02532		0.0050	0.05	0	50.6	41
2,4-Dinitrotoluene		0.04362		0.0050	0.05	0	87.2	46
4-Nitrophenol		0.05533		0.025	0.1	0	55.3	15
N-Nitrosodi-n-propylamine		0.03806		0.0050	0.05	0	76.1	43
Pentachlorophenol		0.1005		0.025	0.1	0	101	10
Phenol		0.03856		0.0050	0.1	0	38.6	23
Pyrene		0.04534		0.0050	0.05	0	90.7	53
1,2,4-Trichlorobenzene		0.0305		0.0050	0.05	0	61	42
Acenaphthene		0.04377		0.0050	0.05	0	87.5	54
4-Chloro-3-methylphenol		0.09064		0.0050	0.1	0	90.6	49
2-Chlorophenol		0.08328		0.0050	0.1	0	83.3	44
1,4-Dichlorobenzene		0.03149		0.0050	0.05	0	63	41
2,4-Dinitrotoluene		0.04525		0.0050	0.05	0	90.5	46
4-Nitrophenol		0.0556		0.025	0.1	0	55.6	15
N-Nitrosodi-n-propylamine		0.04201		0.0050	0.05	0	84	43
Pentachlorophenol		0.1048		0.025	0.1	0	105	10
Phenol		0.04193		0.0050	0.1	0	41.9	23
Pyrene		0.0462		0.0050	0.05	0	92.4	53
1,2,4-Trichlorobenzene		0.03678		0.0050	0.05	0	73.6	42
Acenaphthene		0.04377		0.0050	0.05	0	87.5	54
4-Chloro-3-methylphenol		0.09064		0.0050	0.1	0	90.6	49
2-Chlorophenol		0.08328		0.0050	0.1	0	83.3	44
1,4-Dichlorobenzene		0.03149		0.0050	0.05	0	63	41
2,4-Dinitrotoluene		0.04525		0.0050	0.05	0	90.5	46
4-Nitrophenol		0.0556		0.025	0.1	0	55.6	15
N-Nitrosodi-n-propylamine		0.04201		0.0050	0.05	0	84	43
Pentachlorophenol		0.1048		0.025	0.1	0	105	10
Phenol		0.04193		0.0050	0.1	0	41.9	23
Pyrene		0.0462		0.0050	0.05	0	92.4	53
1,2,4-Trichlorobenzene		0.03678		0.0050	0.05	0	73.6	42

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>LCSD-92533</b>	<b>ZZZZZ</b>	<b>LCSD</b>	<b>mg/L</b>	<b>SW8270C</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-7_160531A</b>	<b>3290210</b>
Analyte								
		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit
								High Limit
							RPD Ref Val	% RPD
							RPD Limit	RPD Qual
Acenaphthene		0.04377		0.0050	0.05	0	87.5	54
4-Chloro-3-methylphenol		0.09064		0.0050	0.1	0	90.6	49
2-Chlorophenol		0.08328		0.0050	0.1	0	83.3	44
1,4-Dichlorobenzene		0.03149		0.0050	0.05	0	63	41
2,4-Dinitrotoluene		0.04525		0.0050	0.05	0	90.5	46
4-Nitrophenol		0.0556		0.025	0.1	0	55.6	15
N-Nitrosodi-n-propylamine		0.04201		0.0050	0.05	0	84	43
Pentachlorophenol		0.1048		0.025	0.1	0	105	10
Phenol		0.04193		0.0050	0.1	0	41.9	23
Pyrene		0.0462		0.0050	0.05	0	92.4	53
1,2,4-Trichlorobenzene		0.03678		0.0050	0.05	0	73.6	42
Acenaphthene		0.04377		0.0050	0.05	0	87.5	54
4-Chloro-3-methylphenol		0.09064		0.0050	0.1	0	90.6	49
2-Chlorophenol		0.08328		0.0050	0.1	0	83.3	44
1,4-Dichlorobenzene		0.03149		0.0050	0.05	0	63	41
2,4-Dinitrotoluene		0.04525		0.0050	0.05	0	90.5	46
4-Nitrophenol		0.0556		0.025	0.1	0	55.6	15
N-Nitrosodi-n-propylamine		0.04201		0.0050	0.05	0	84	43
Pentachlorophenol		0.1048		0.025	0.1	0	105	10
Phenol		0.04193		0.0050	0.1	0	41.9	23
Pyrene		0.0462		0.0050	0.05	0	92.4	53
1,2,4-Trichlorobenzene		0.03678		0.0050	0.05	0	73.6	42

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

**STAT Analysis Corporation**

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire,  
**Test No:** SW8270C-SIM      **Matrix:** W

**QC SUMMARY REPORT  
SURROGATE RECOVERIES**

Sample ID	DCBZ12D4	NO2BZD5	PHEN2F	PHEND14				
16051170-001B	90.6	124 *	106	108				
MB-92532	77.4	76.6	86.6	97.6				
LCS-92532	85.4	87.6	93.6	95.4				
LCSD-92532	85.6	86.6	94.6	95.4				

Acronym	Surrogate	QC Limits
DCBZ12D4	= 1,2-Dichlorobenzene-d4	16-110
NO2BZD5	= Nitrobenzene-d5	35-114
PHEN2F	= 2-Fluorobiphenyl	43-116
PHEND14	= 4-Terphenyl-d14	33-141

\* Surrogate recovery outside acceptance limits

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**GCMS Semivolatiles**  
**BatchID: 92532**

**PREP BATCH SUMMARY**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-92532			1	0	0	1	1.000	5/31/2016	5/31/2016
LCS-92532			1	0	0	1	1.000	5/31/2016	5/31/2016
LCSD-92532			1	0	0	1	1.000	5/31/2016	5/31/2016
16051170-001B	Aqueous		1	0	0	1	1.000	5/31/2016	5/31/2016
16051175-001B	Aqueous		1	0	0	1	1.000	6/1/2016	6/1/2016
16051175-002B	Aqueous		1	0	0	1	1.000	6/1/2016	6/1/2016
16051175-003B	Aqueous		1	0	0	1	1.000	6/1/2016	6/1/2016
16051175-004B	Aqueous		1	0	0	1	1.000	6/1/2016	6/1/2016
16051175-005B	Aqueous		1	0	0	1	1.000	6/1/2016	6/1/2016
16051141-008B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016

**QC SUMMARY**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:				
<b>MB-92532</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW8270C-SIM</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-9_160531A</b>	<b>3290418</b>				
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit Qual

Acenaphthene	ND	0.0010										
Acenaphthylene	ND	0.0010										
Anthracene	ND	0.0010										
Benz(a)anthracene	ND	0.00010										
Benzo(a)pyrene	ND	0.00010										
Benzo(b)fluoranthene	ND	0.00010										
Benzo(g,h,i)perylene	ND	0.0010										
Benzo(k)fluoranthene	ND	0.00010										
Carbazole	ND	0.00010										
Chrysene	ND	0.00010										
Dibenz(a,h)anthracene	ND	0.00010										
2,4-Dinitrotoluene	ND	0.00010										
2,6-Dinitrotoluene	ND	0.00010										
Fluoranthene	0.00003	0.0010										J
Fluorene	0.00005	0.0010										J
Indeno(1,2,3-cd)pyrene	ND	0.00010										
N-Nitrosodi-n-propylamine	ND	0.00010										
Naphthalene	ND	0.0010										
Nitrobenzene	ND	0.0010										
Pentachlorophenol	ND	0.00050										
Phenanthrene	0.00015	0.0010										J
Pyrene	ND	0.0010										

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:				
<b>LCS-92532</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8270C-SIM</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-9_160531A</b>	<b>3290419</b>				
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	Limit Qual

Acenaphthene	0.00448	0.0010	0.005	0	89.6	50	125	0	0		
Acenaphthylene	0.00429	0.0010	0.005	0	85.8	50	125	0	0		
Anthracene	0.00445	0.0010	0.005	0	89	50	125	0	0		
Benz(a)anthracene	0.00449	0.00010	0.005	0	89.8	50	125	0	0		
Benzo(a)pyrene	0.0046	0.00010	0.005	0	92	50	125	0	0		
Benzo(b)fluoranthene	0.005	0.00010	0.005	0	100	50	125	0	0		
Benzo(g,h,i)perylene	0.00475	0.0010	0.005	0	95	50	125	0	0		
Benzo(k)fluoranthene	0.00463	0.00010	0.005	0	92.6	50	125	0	0		

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
	* - Non Accredited Parameter	H/HT - Holding Time Exceeded	

<b>CLIENT:</b>	Tetra Tech EM Inc.	<b>ANALYTICAL QC SUMMARY REPORT</b>							
<b>Work Order:</b>	16051170	<b>GCMS Semivolatiles</b>							
<b>Project:</b>	103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei	<b>BatchID: 92532</b>							

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:					
<b>LCS-92532</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8270C-SIM</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-9_160531A</b>	<b>3290419</b>					
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Carbazole	0.00466	0.00010	0.005	0	93.2	50	125	0	0	0	0
Chrysene	0.00491	0.00010	0.005	0	98.2	50	125	0	0	0	0
Dibenz(a,h)anthracene	0.00531	0.00010	0.005	0	106	50	125	0	0	0	0
2,4-Dinitrotoluene	0.00413	0.00010	0.005	0	82.6	50	125	0	0	0	0
2,6-Dinitrotoluene	0.00402	0.00010	0.005	0	80.4	50	125	0	0	0	0
Fluoranthene	0.0045	0.0010	0.005	0.00003	89.4	50	125	0	0	0	0
Fluorene	0.00436	0.0010	0.005	0.00005	86.2	50	125	0	0	0	0
Indeno(1,2,3-cd)pyrene	0.00523	0.00010	0.005	0	105	50	125	0	0	0	0
N-Nitrosodi-n-propylamine	0.00429	0.00010	0.005	0	85.8	50	125	0	0	0	0
Naphthalene	0.00447	0.0010	0.005	0	89.4	50	125	0	0	0	0
Nitrobenzene	0.00423	0.0010	0.005	0	84.6	50	125	0	0	0	0
Pentachlorophenol	0.00621	0.00050	0.01	0	62.1	50	125	0	0	0	0
Phenanthrene	0.00452	0.0010	0.005	0.00015	87.4	50	125	0	0	0	0
Pyrene	0.0043	0.0010	0.005	0	86	50	125	0	0	0	0

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:					
<b>LCSD-92532</b>	<b>ZZZZZ</b>	<b>LCSD</b>	<b>mg/L</b>	<b>SW8270C-SIM</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>SVOC-9_160531A</b>	<b>3290421</b>					
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	0.00448	0.0010	0.005	0	89.6	50	125	0.00448	0	25			
Acenaphthylene	0.00433	0.0010	0.005	0	86.6	50	125	0.00429	0.928	25			
Anthracene	0.00446	0.0010	0.005	0	89.2	50	125	0.00445	0.224	25			
Benz(a)anthracene	0.00452	0.00010	0.005	0	90.4	50	125	0.00449	0.666	25			
Benzo(a)pyrene	0.00437	0.00010	0.005	0	87.4	50	125	0.00446	5.13	25			
Benzo(b)fluoranthene	0.00492	0.00010	0.005	0	98.4	50	125	0.005	1.61	25			
Benzo(g,h,i)perylene	0.00497	0.0010	0.005	0	99.4	50	125	0.00475	4.53	25			
Benzo(k)fluoranthene	0.00469	0.00010	0.005	0	93.8	50	125	0.00463	1.29	25			
Carbazole	0.00461	0.00010	0.005	0	92.2	50	125	0.00466	1.08	25			
Chrysene	0.0049	0.00010	0.005	0	98	50	125	0.00491	0.204	25			
Dibenz(a,h)anthracene	0.00545	0.00010	0.005	0	109	50	125	0.00531	2.60	25			
2,4-Dinitrotoluene	0.00428	0.00010	0.005	0	85.6	50	125	0.00413	3.57	25			
2,6-Dinitrotoluene	0.00382	0.00010	0.005	0	76.4	50	125	0.00402	5.10	25			
Fluoranthene	0.00456	0.0010	0.005	0.00003	90.6	50	125	0.00445	1.32	25			
Fluorene	0.0046	0.0010	0.005	0.00005	91	50	125	0.00436	5.36	25			
Indeno(1,2,3-cd)pyrene	0.00528	0.00010	0.005	0	106	50	125	0.00523	0.951	25			
N-Nitrosodi-n-propylamine	0.00424	0.00010	0.005	0	84.8	50	125	0.00429	1.17	25			
Naphthalene	0.00457	0.0010	0.005	0	91.4	50	125	0.00447	2.21	25			
Nitrobenzene	0.00458	0.0010	0.005	0	91.6	50	125	0.00423	7.95	25			
Pentachlorophenol	0.00661	0.00050	0.01	0	66.1	50	125	0.00621	6.24	25			
Phenanthrene	0.00457	0.0010	0.005	0.00015	88.4	50	125	0.00452	1.10	25			
Pyrene	0.00432	0.0010	0.005	0	86.4	50	125	0.0043	0.464	25			

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J -	Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	E - Value above quantitation range
* -	Non Accredited Parameter	H/HT - Holding Time Exceeded	

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**GC Semivolatiles**  
**BatchID: 92534**

**PREP BATCH SUMMARY**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-92534			1	0	0	1	1.000	5/31/2016	5/31/2016
LCS-92534			1	0	0	1	1.000	5/31/2016	5/31/2016
LCSD-92534			1	0	0	1	1.000	5/31/2016	5/31/2016
16051170-001B	Aqueous		1	0	0	1	1.000	5/31/2016	5/31/2016
16051175-001B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016
16051175-002B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016
16051175-003B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016
16051175-004B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016
16051175-005B	Aqueous		0.5	0	0	0.5	1.000	6/1/2016	6/1/2016

**QC SUMMARY**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:		Analysis Date:		Run ID:	SeqNo:
<b>MB-92534</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW8015M</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>GC-FID-2_160531A</b>	<b>3290605</b>		
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
TPH (DRO)		ND		0.10						
TPH (ERO)		ND		0.10						*
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:		Analysis Date:		Run ID:	SeqNo:
<b>LCS-92534</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW8015M</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>GC-FID-2_160531A</b>	<b>3290610</b>		
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
TPH (DRO)		1.203		0.10	1	0	120	30	150	0 0
TPH (ERO)		0.8914		0.10	1	0	89.1	30	150	0 0
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:		Analysis Date:		Run ID:	SeqNo:
<b>LCSD-92534</b>	<b>ZZZZZ</b>	<b>LCSD</b>	<b>mg/L</b>	<b>SW8015M</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>GC-FID-2_160531A</b>	<b>3290612</b>		
Analyte		Result		PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
TPH (DRO)		1.197		0.10	1	0	120	30	150	1.203 0.486 25
TPH (ERO)		0.9033		0.10	1	0	90.3	30	150	0.8914 1.32 25 *

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

E - Value above quantitation range

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**Metals**  
**BatchID: 92525**

**PREP BATCH SUMMARY**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 5/31/16			50	0	(	50	1.000	5/31/2016	5/31/2016
ILCSW2 5/31/16			50	0	(	50	1.000	5/31/2016	5/31/2016
16051170-001C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051170-001CMS	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051170-001CMSD	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
IMBTA1 5/27/16			50	0	(	50	1.000	5/31/2016	5/31/2016
16051001-001B	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051001-001BMS	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051123-001A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051123-002A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051100-001B	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051102-002B	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051103-006A	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051127-001A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051153-002A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051155-002A	Soil		50	0	(	50	1.000	5/31/2016	5/31/2016
16051157-002A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051158-001A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16051160-002A	Solid		50	0	(	50	1.000	5/31/2016	5/31/2016
16050977-001A	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16050977-002A	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051061-001C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051061-002C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051061-003C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051061-004C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016
16051061-005C	Aqueous		50	0	(	50	1.000	5/31/2016	5/31/2016

**QC SUMMARY**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:				
<b>IMBW2 5/31/16</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW6020</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>ICPMS_160531A</b>	<b>3289412</b>				
Analyte				PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Qual
Arsenic			ND	0.0040								
Barium			ND	0.0040								
Cadmium			ND	0.0020								
Chromium			0.00055	0.0040								J
Lead			ND	0.0020								
Selenium			ND	0.0040								
Silver			0.0015	0.0040								J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:					
<b>ILCSW2 5/31/16</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW6020</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>ICPMS_160531A</b>	<b>3289413</b>					
Analyte				PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Arsenic			0.5201	0.0040	0.5	0	104	80	120	0	0		
Barium			0.538	0.0040	0.5	0	108	80	120	0	0		
Cadmium			0.5354	0.0020	0.5	0	107	80	120	0	0		
Chromium			0.5157	0.0040	0.5	0.00055	103	80	120	0	0		
Lead			0.5271	0.0020	0.5	0	105	80	120	0	0		
Selenium			0.5277	0.0040	0.5	0	106	80	120	0	0		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

H/HT - Holding Time Exceeded

**CLIENT:** Tetra Tech EM Inc. **ANALYTICAL QC SUMMARY REPORT**  
**Work Order:** 16051170 **Metals**  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei **BatchID: 92525**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>ILCSW2 5/31/16</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW6020</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>ICPMS_160531A</b>	<b>3289413</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
Silver	0.2281	0.0040	0.2	0.0015	113	80	120	0 0
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>16051170-001CMS</b>	<b>FHTF-SW-002-052</b>	<b>MS</b>	<b>mg/L</b>	<b>SW6020</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>ICPMS_160531A</b>	<b>3289418</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
Arsenic	0.5184	0.0040	0.5	0.00433	103	75	125	0 0
Barium	0.6118	0.0040	0.5	0.08354	106	75	125	0 0
Cadmium	0.4973	0.0020	0.5	0	99.5	75	125	0 0
Chromium	0.4705	0.0040	0.5	0.00143	93.8	75	125	0 0
Lead	0.4743	0.0020	0.5	0.00375	94.1	75	125	0 0
Selenium	0.5304	0.0040	0.5	0.01394	103	75	125	0 0
Silver	0.2102	0.0040	0.2	0.0006	105	75	125	0 0
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>16051170-001CMSD</b>	<b>FHTF-SW-002-052</b>	<b>MSD</b>	<b>mg/L</b>	<b>SW6020</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>ICPMS_160531A</b>	<b>3289419</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val %RPD Limit Qual
Arsenic	0.514	0.0040	0.5	0.00433	102	75	125	0.5184 0.852 20
Barium	0.6064	0.0040	0.5	0.08354	105	75	125	0.6118 0.887 20
Cadmium	0.4962	0.0020	0.5	0	99.2	75	125	0.4973 0.221 20
Chromium	0.4734	0.0040	0.5	0.00143	94.4	75	125	0.4705 0.614 20
Lead	0.5138	0.0020	0.5	0.00375	102	75	125	0.4743 8.00 20
Selenium	0.5296	0.0040	0.5	0.01394	103	75	125	0.5304 0.151 20
Silver	0.2084	0.0040	0.2	0.0006	104	75	125	0.2102 0.860 20

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank  
E - Value above quantitation range

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 16051170  
**Project:** 103X90260001 5051605016, Ford Heights Tire Fire, Ford Hei

**ANALYTICAL QC SUMMARY REPORT**  
**Metals**  
**BatchID: 92526**

**PREP BATCH SUMMARY**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW1 5/31/16			30	0	0	30	1.000	5/31/2016	5/31/2016
HGLCSW1 5/31/16			30	0	0	30	1.000	5/31/2016	5/31/2016
16051170-001C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
HGMFTA1 5/27/16			30	0	0	30	1.000	5/31/2016	5/31/2016
16051102-002B	Soil		30	0	0	30	1.000	5/31/2016	5/31/2016
16051127-001A	Solid		30	0	0	30	1.000	5/31/2016	5/31/2016
16051127-001AMS	Solid		30	0	0	30	1.000	5/31/2016	5/31/2016
16051127-001AMSD	Solid		30	0	0	30	1.000	5/31/2016	5/31/2016
HGMFTB 5/27/16			30	0	0	30	1.000	5/31/2016	5/31/2016
16051102-001B	Soil		30	0	0	30	1.000	5/31/2016	5/31/2016
16051102-001BMS	Soil		30	0	0	30	1.000	5/31/2016	5/31/2016
16051061-001C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051061-002C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051061-003C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051061-004C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051061-005C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051076-011C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051175-001C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051175-002C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051175-003C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051175-004C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016
16051175-005C	Aqueous		30	0	0	30	1.000	5/31/2016	5/31/2016

**QC SUMMARY**

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>16051127-001AMS</b>	<b>ZZZZZ</b>	<b>MS</b>	<b>mg/L</b>	<b>SW1311/7470A</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>CETAC 2_160531A</b>	<b>3289156</b>
Analyte		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Mercury		0.0027	0.00020	0.0025	0	108	75	125
RPD Ref Val	%RPD	RPD Limit	RPD Qual		0	0		
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>16051127-001AMSD</b>	<b>ZZZZZ</b>	<b>MSD</b>	<b>mg/L</b>	<b>SW1311/7470A</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>CETAC 2_160531A</b>	<b>3289157</b>
Analyte		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Mercury		0.0028	0.00020	0.0025	0	112	75	125
RPD Ref Val	%RPD	RPD Limit	RPD Qual		0.0027	3.64	20	
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>HGMBW1 5/31/16</b>	<b>ZZZZZ</b>	<b>MBLK</b>	<b>mg/L</b>	<b>SW7470A</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>CETAC 2_160531A</b>	<b>3289145</b>
Analyte		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Mercury		ND	0.00020					
RPD Ref Val	%RPD	RPD Limit	RPD Qual					
Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
<b>HGLCSW1 5/31/16</b>	<b>ZZZZZ</b>	<b>LCS</b>	<b>mg/L</b>	<b>SW7470A</b>	<b>5/31/2016</b>	<b>5/31/2016</b>	<b>CETAC 2_160531A</b>	<b>3289146</b>
Analyte		Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit
Mercury		0.0023	0.00020	0.0025	0	92	85	115
RPD Ref Val	%RPD	RPD Limit	RPD Qual		0	0	0	

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